

VOL. XLIV. No. 9

SEPTEMBER 1959

MECCANO

MAGAZINE



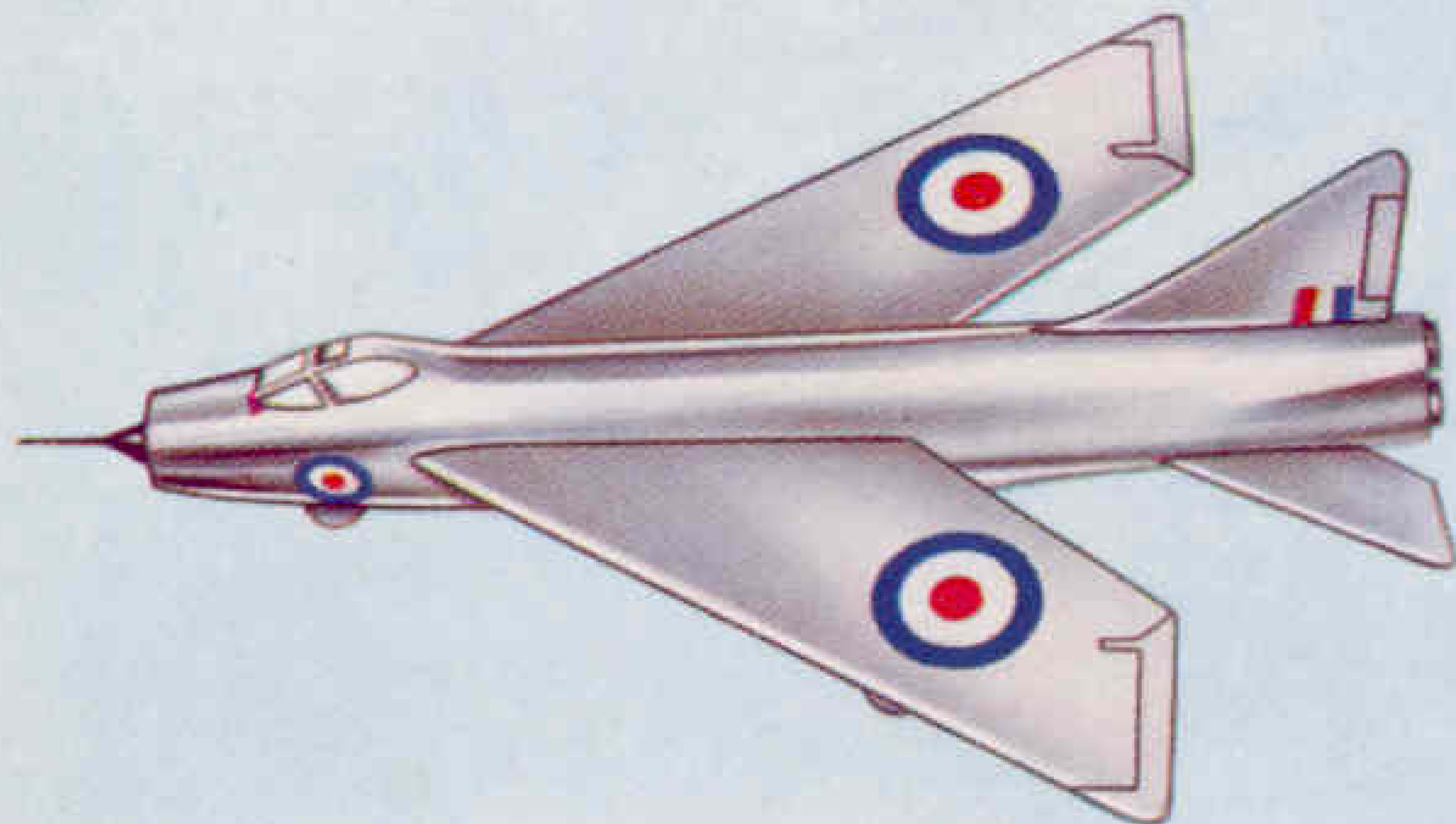
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New models for September



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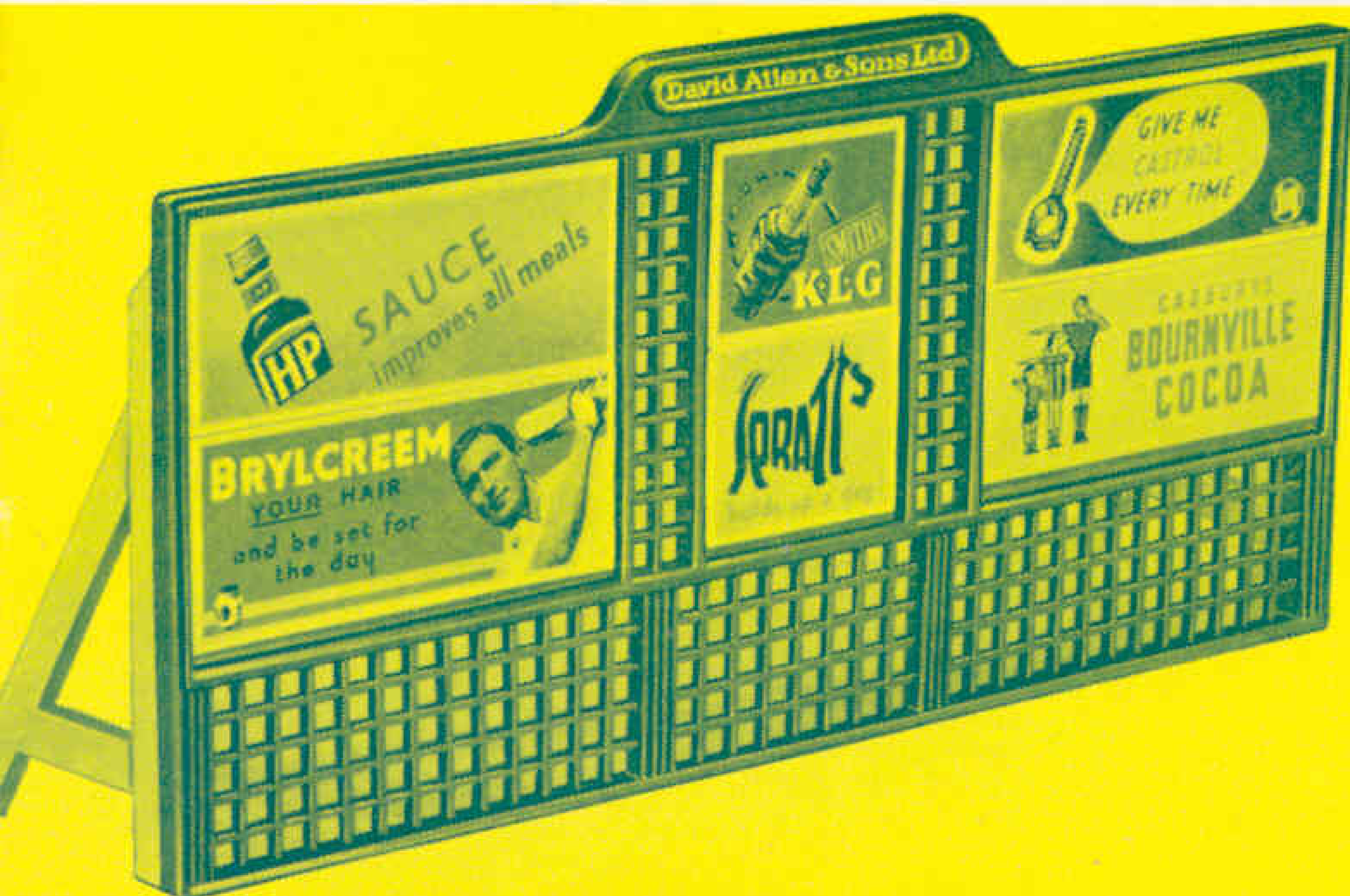
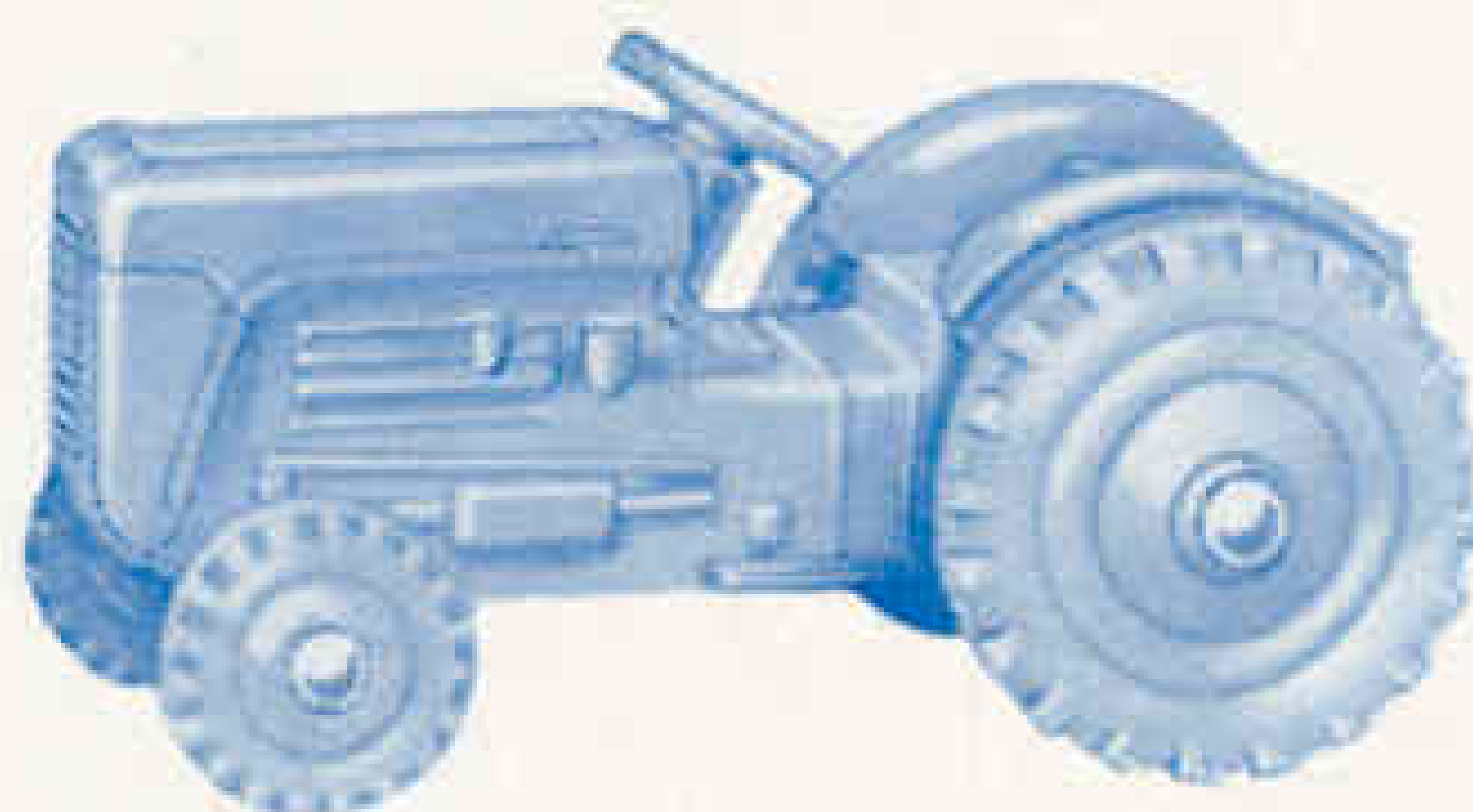
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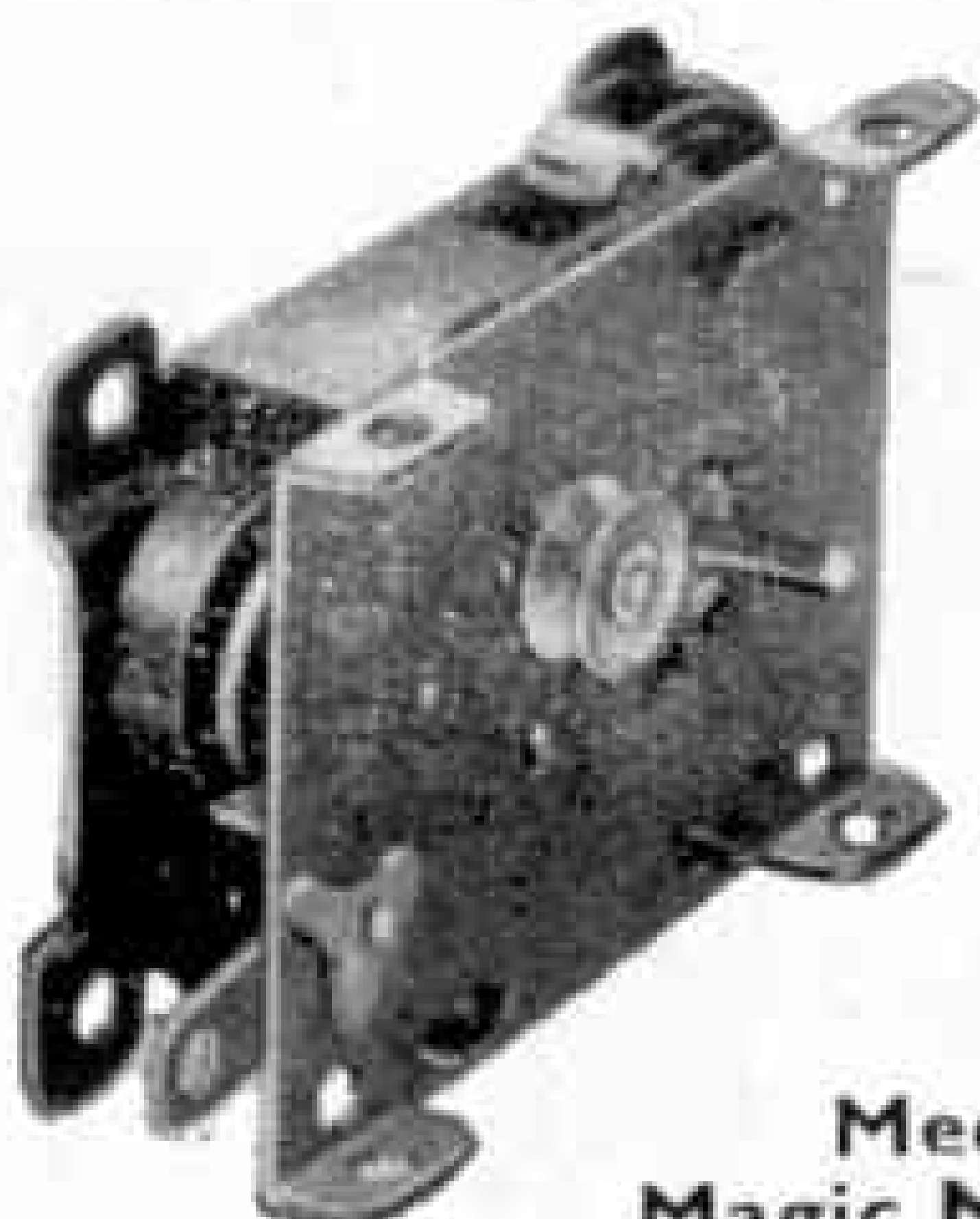
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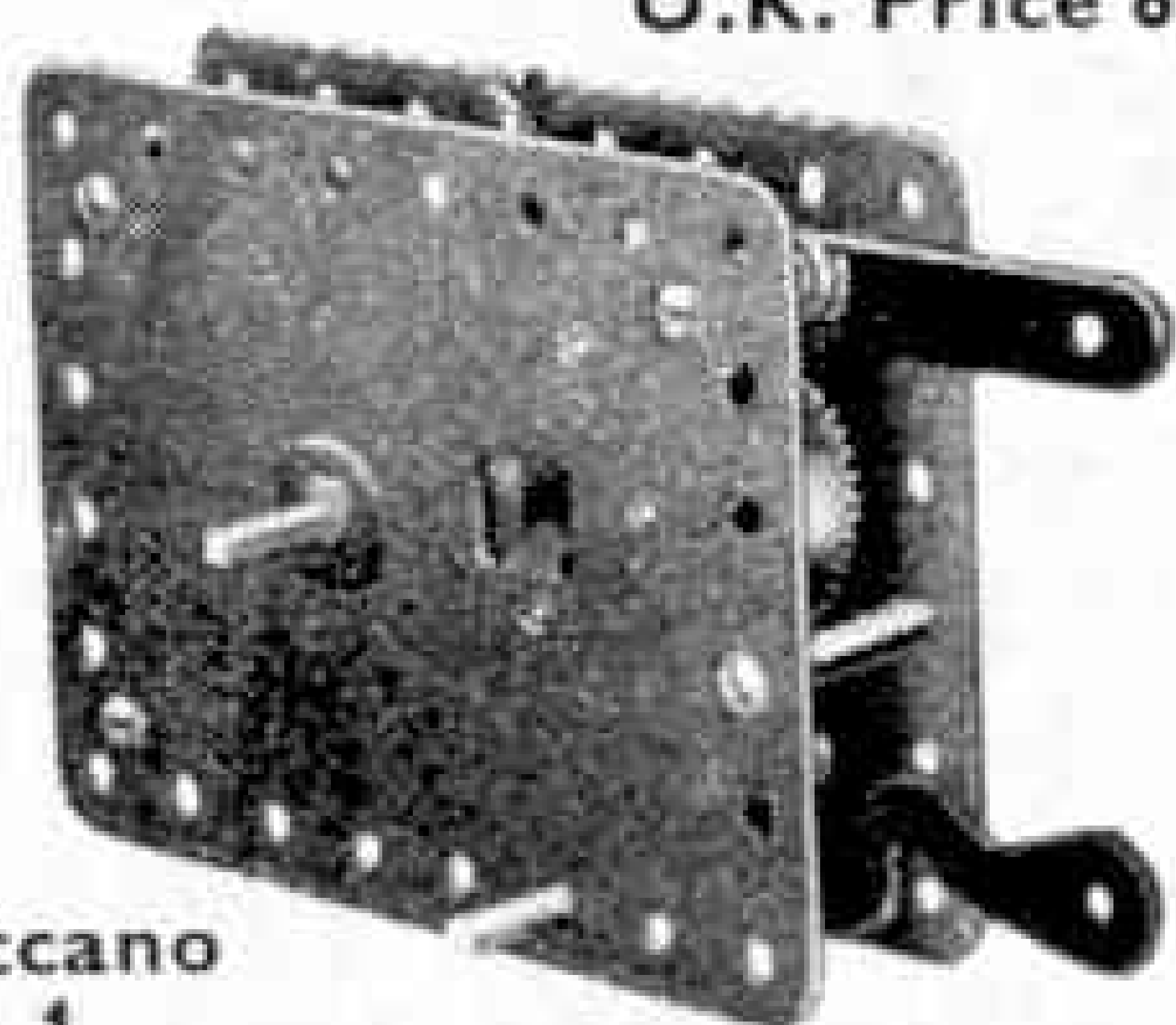
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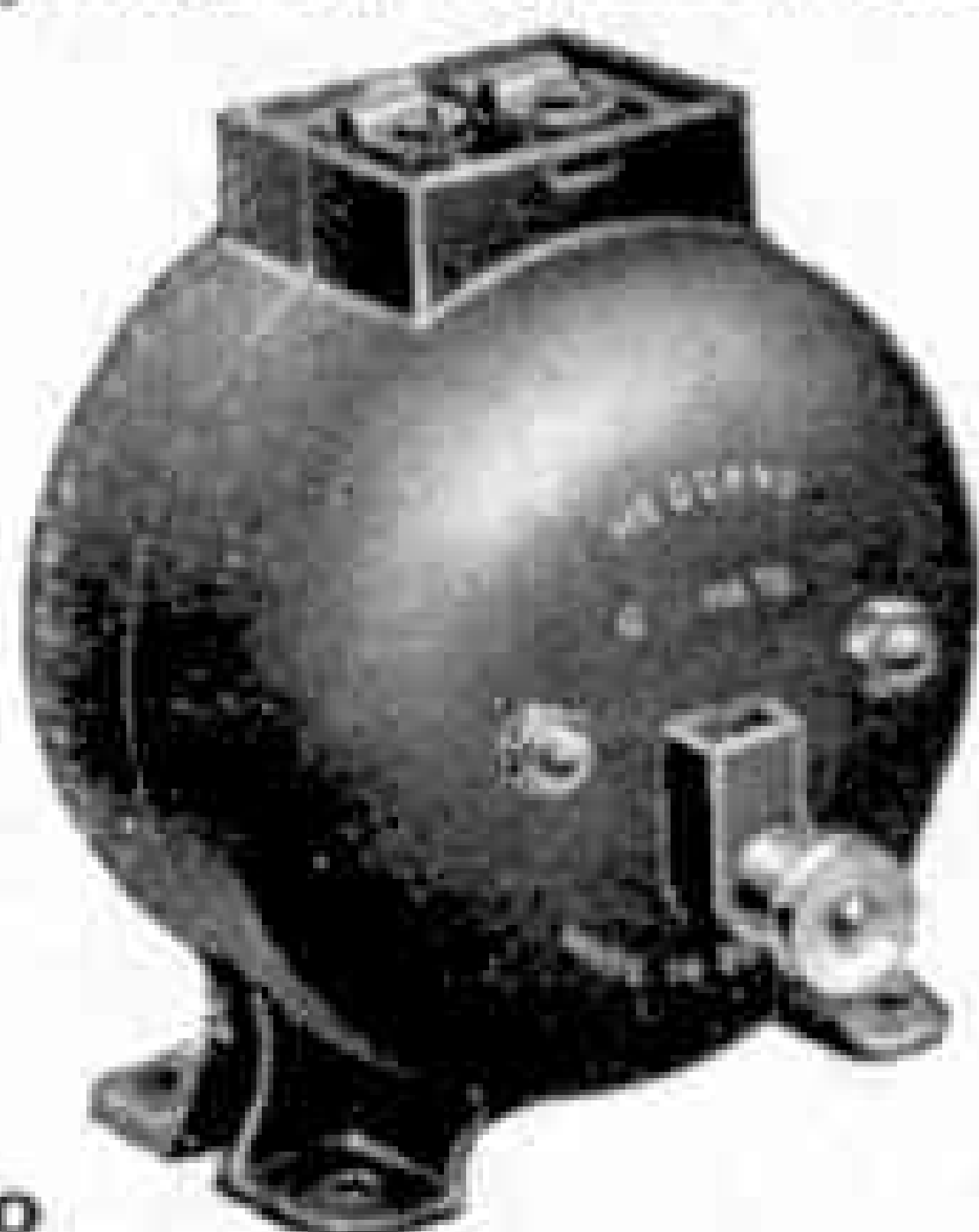
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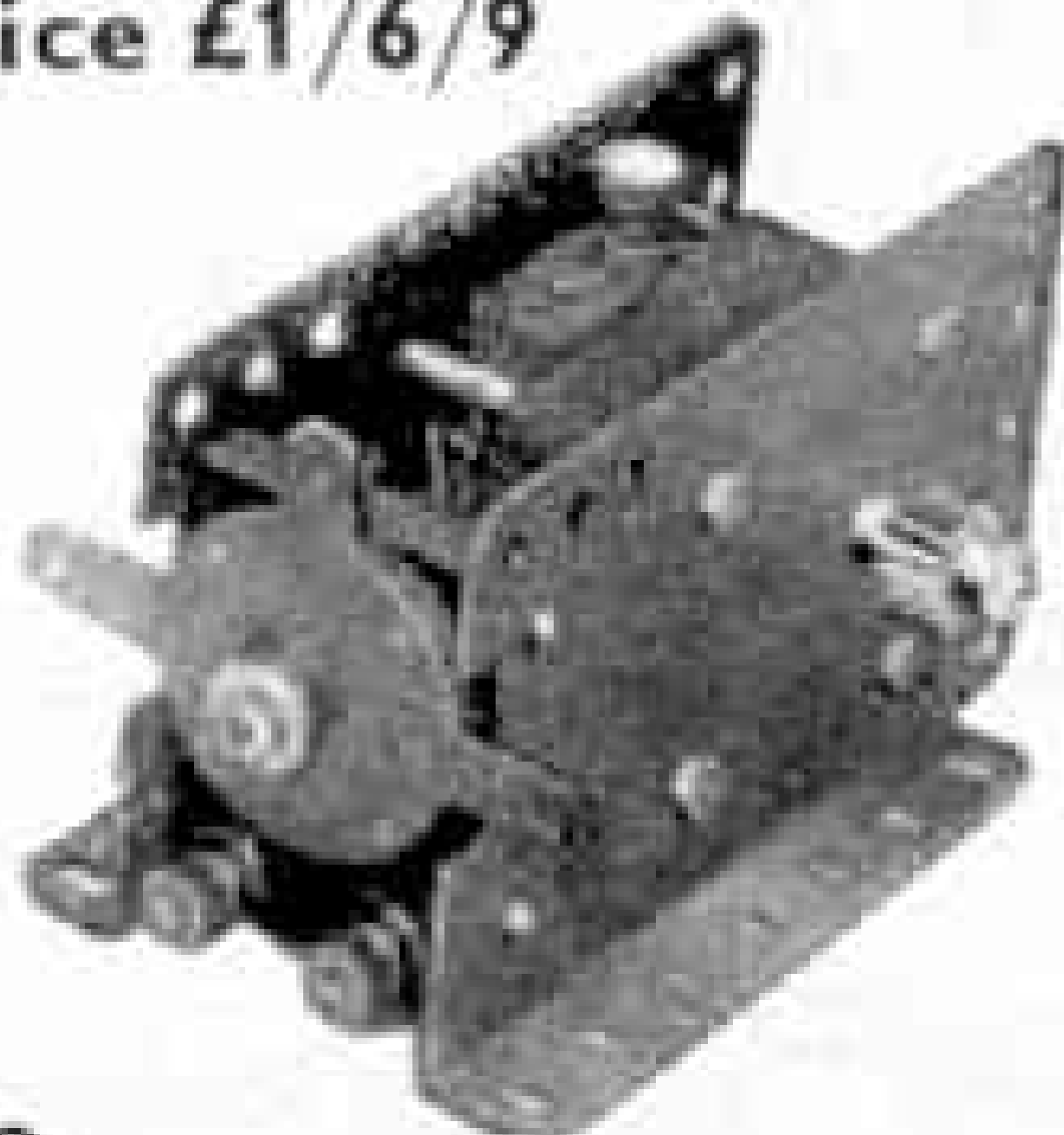
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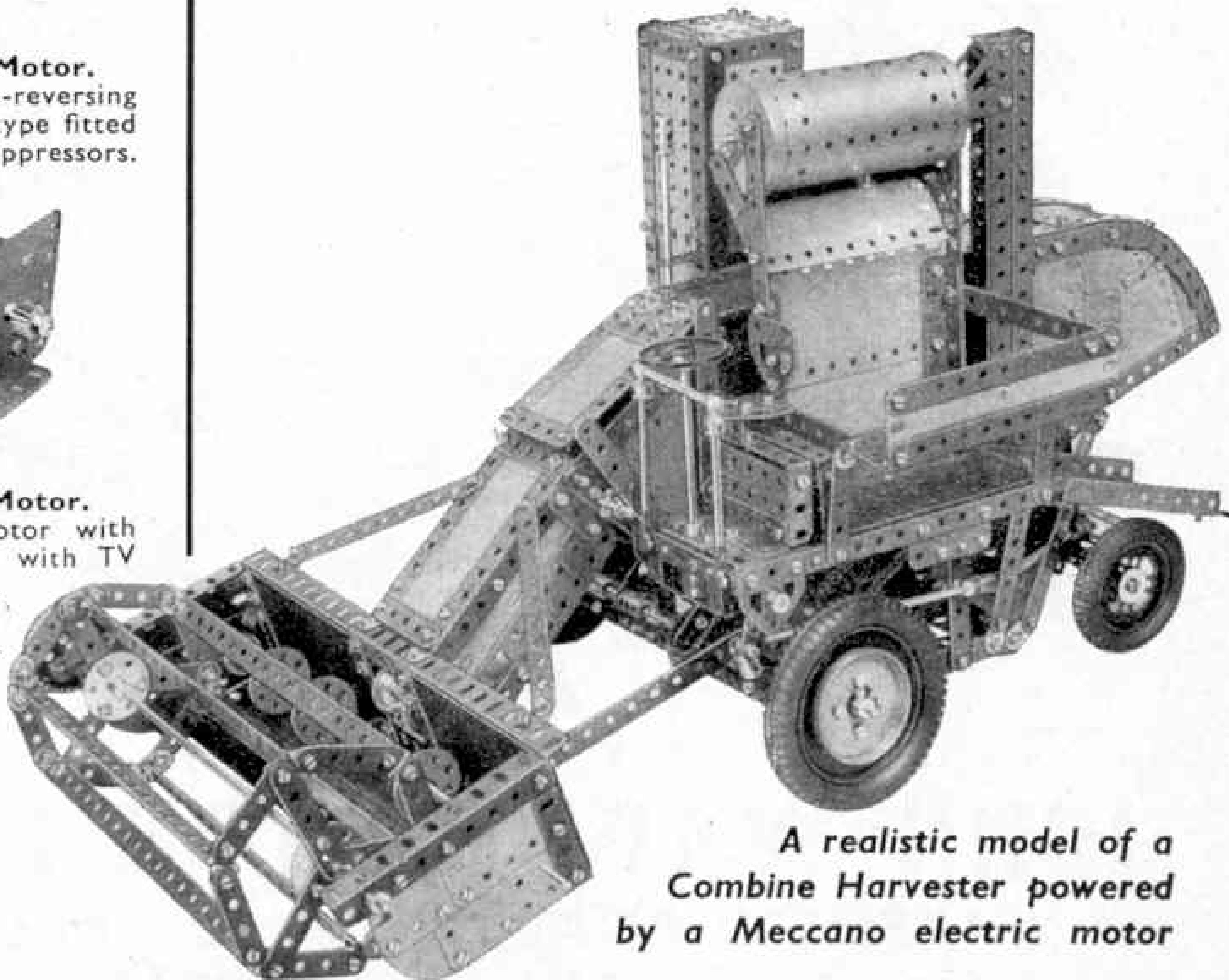
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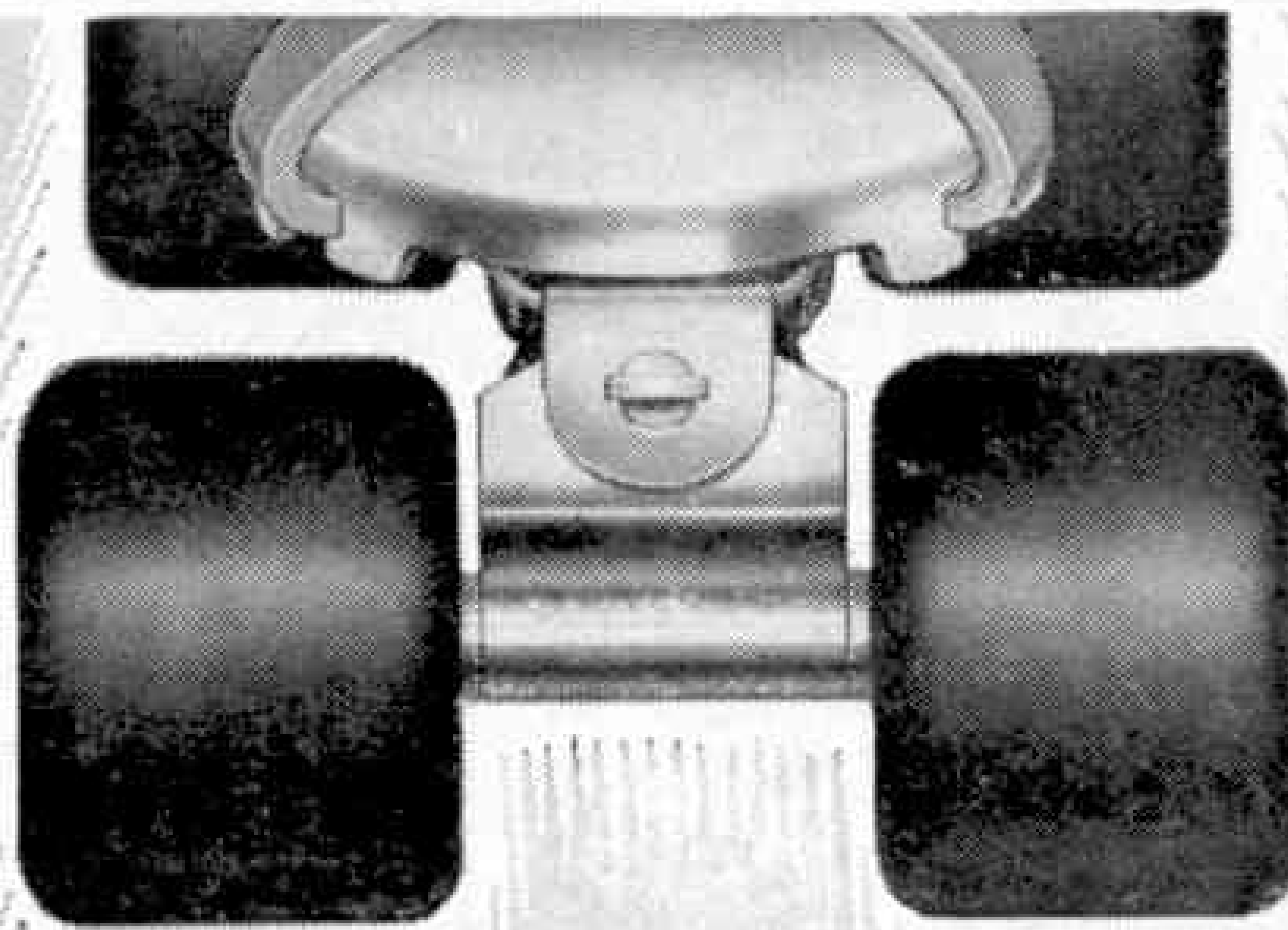
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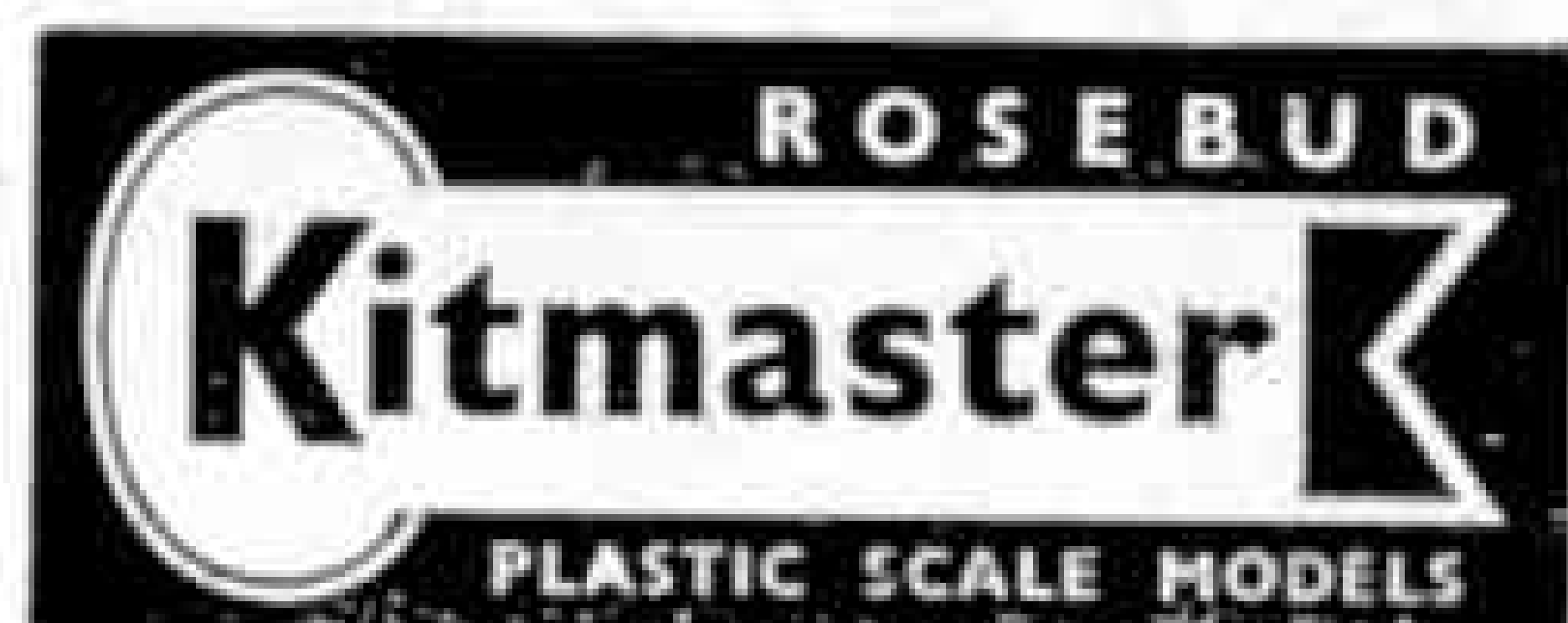
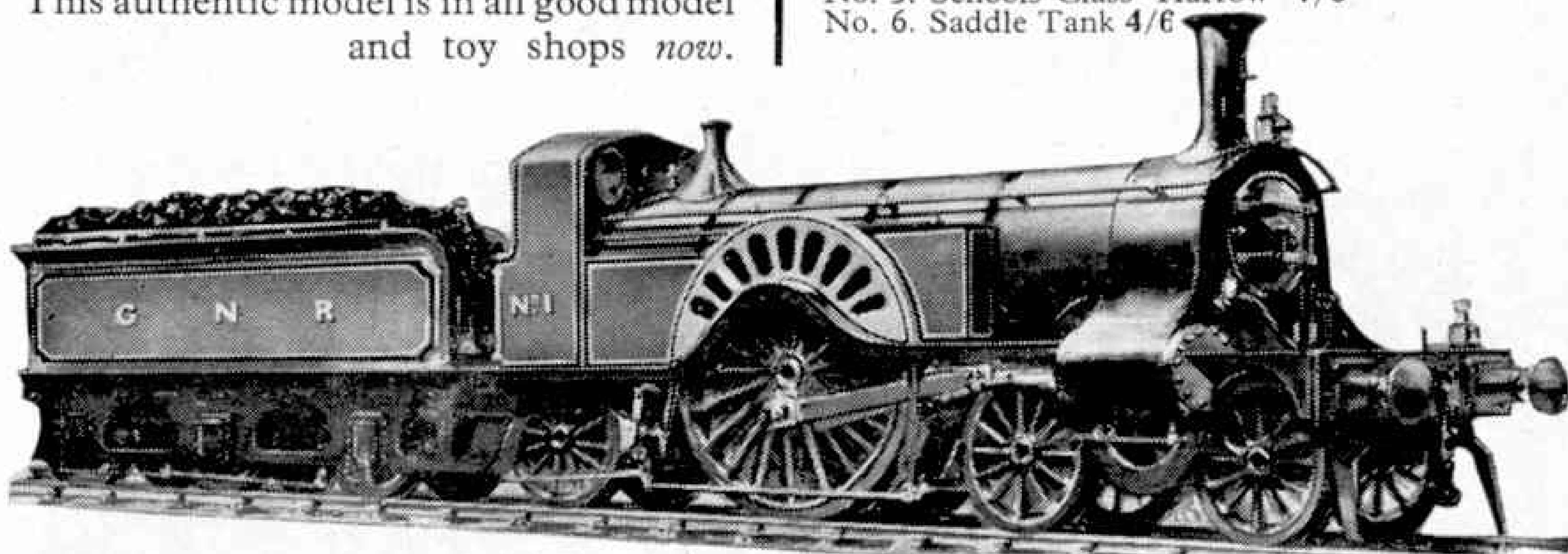
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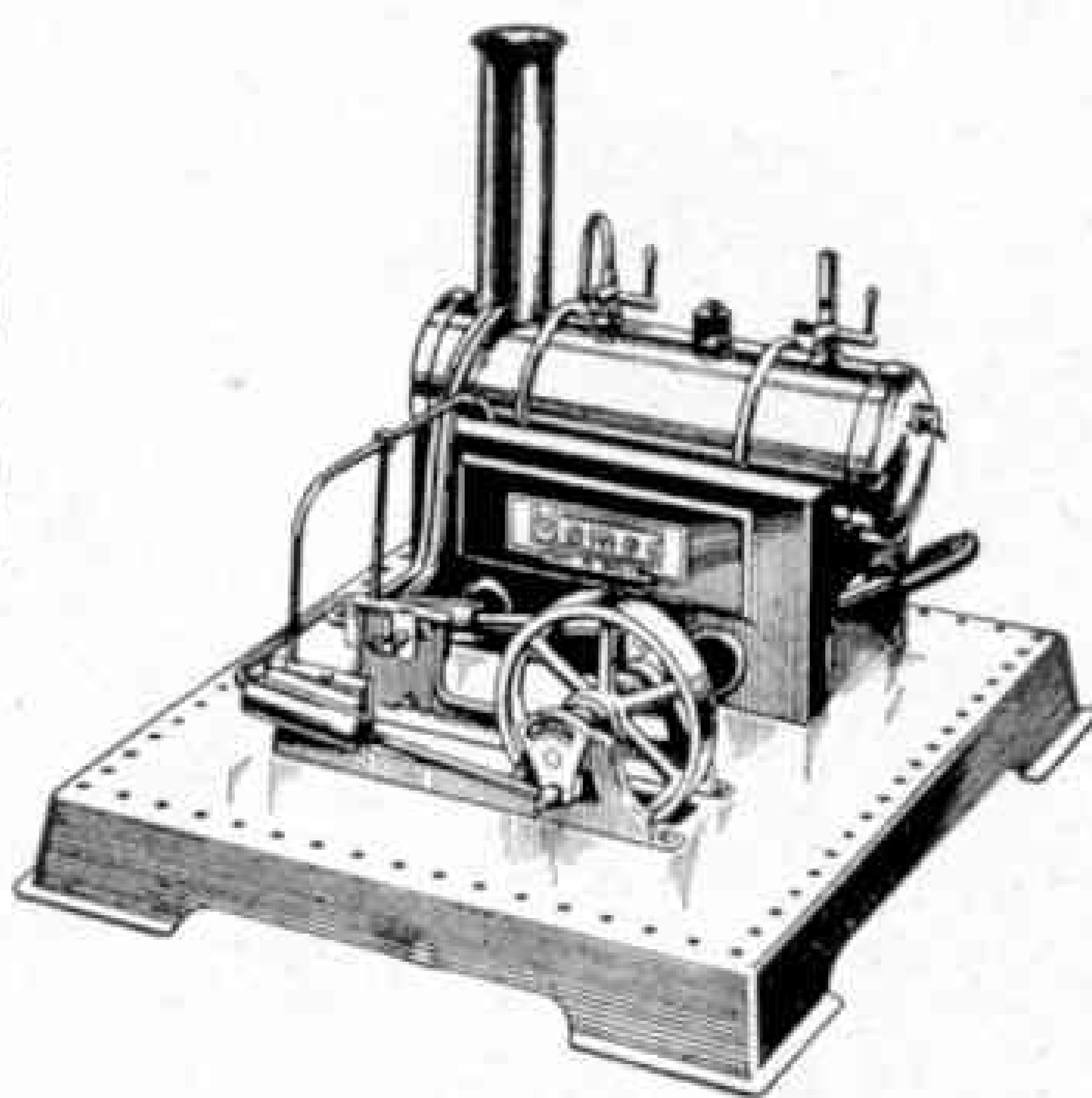
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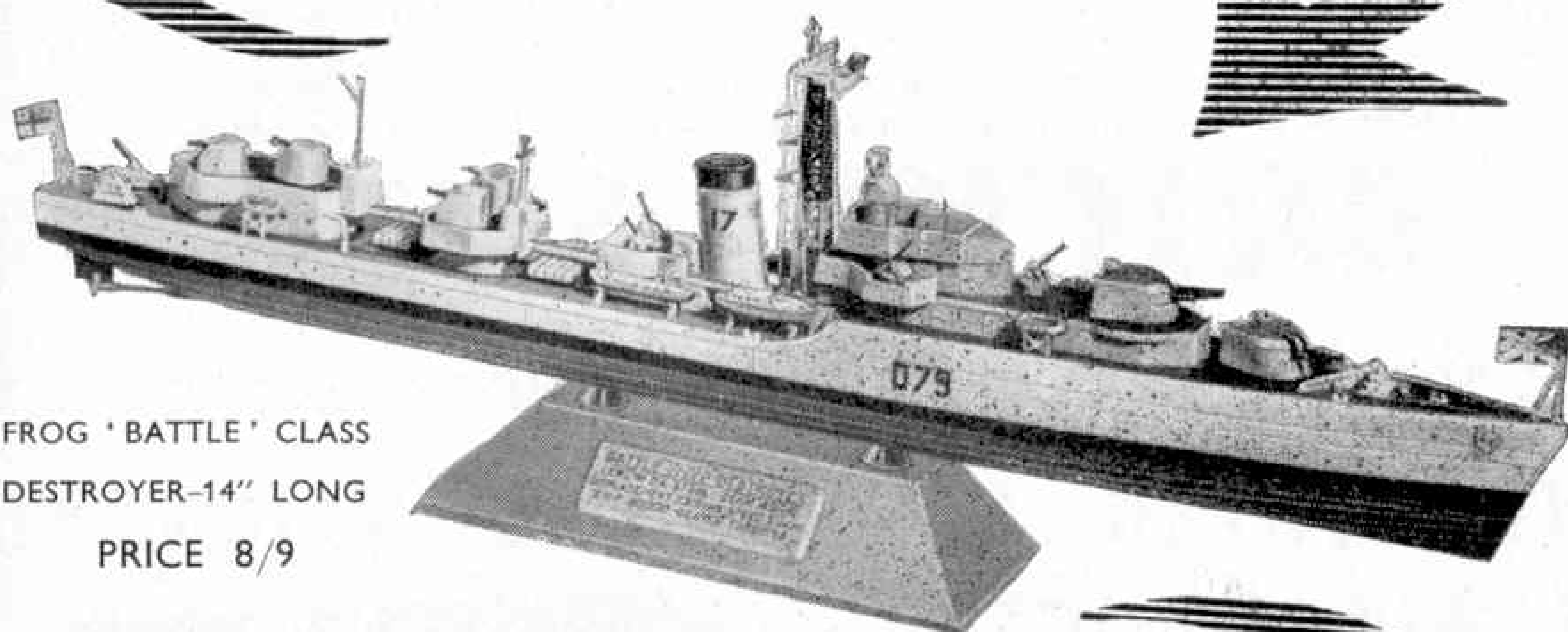
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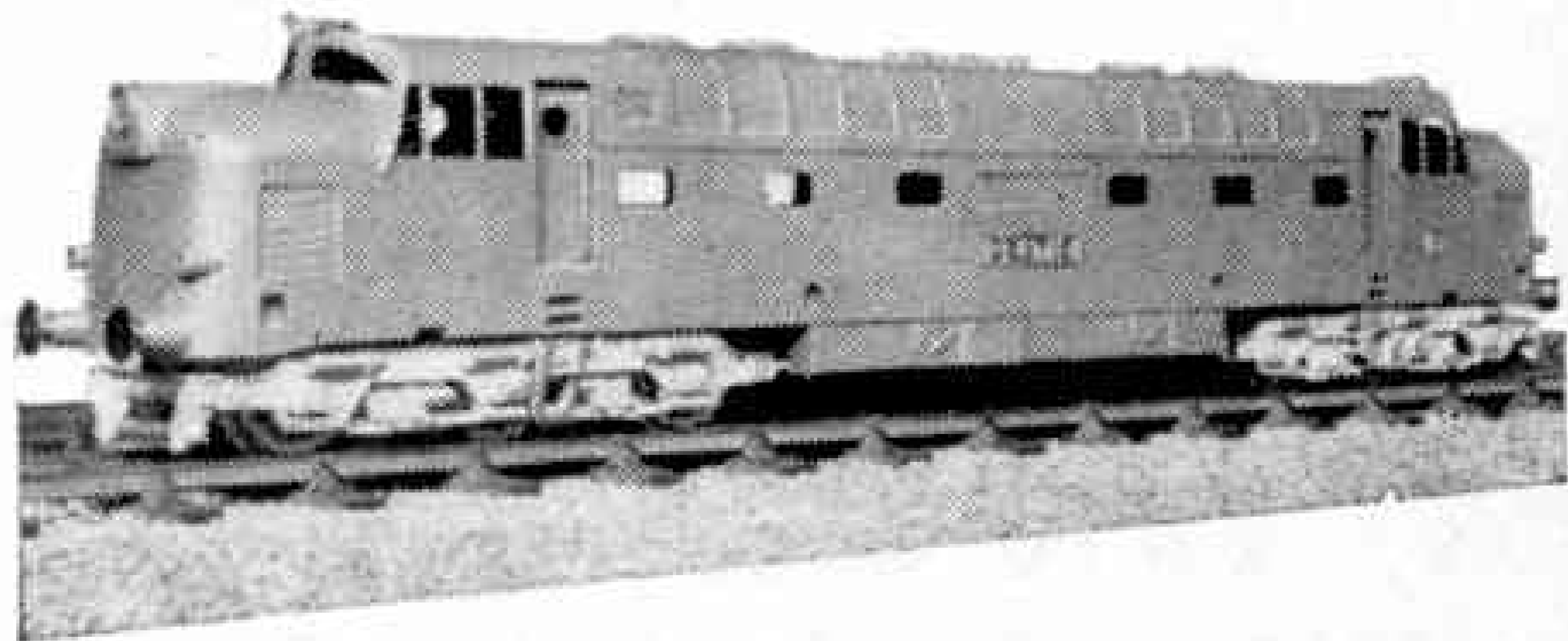
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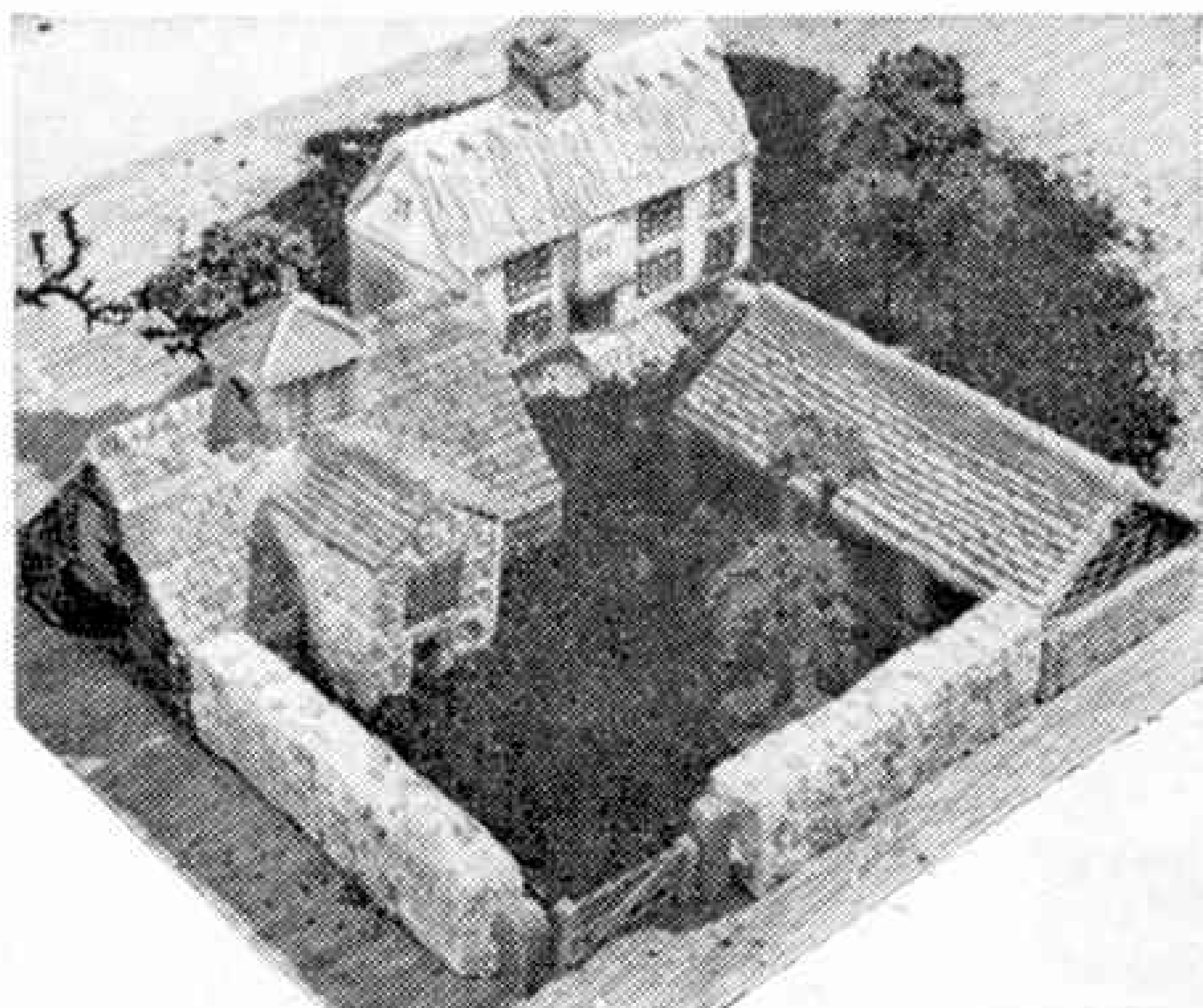
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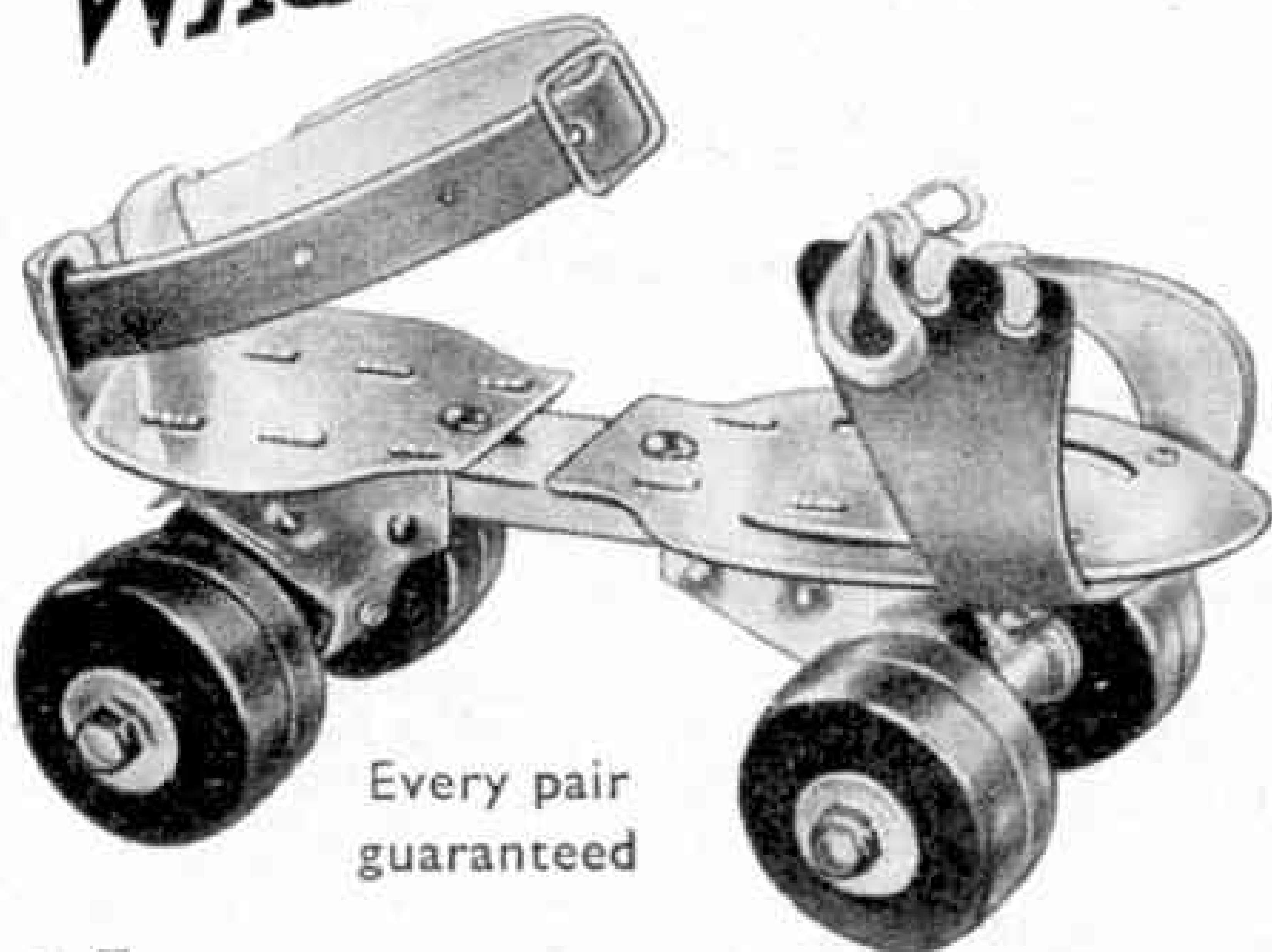
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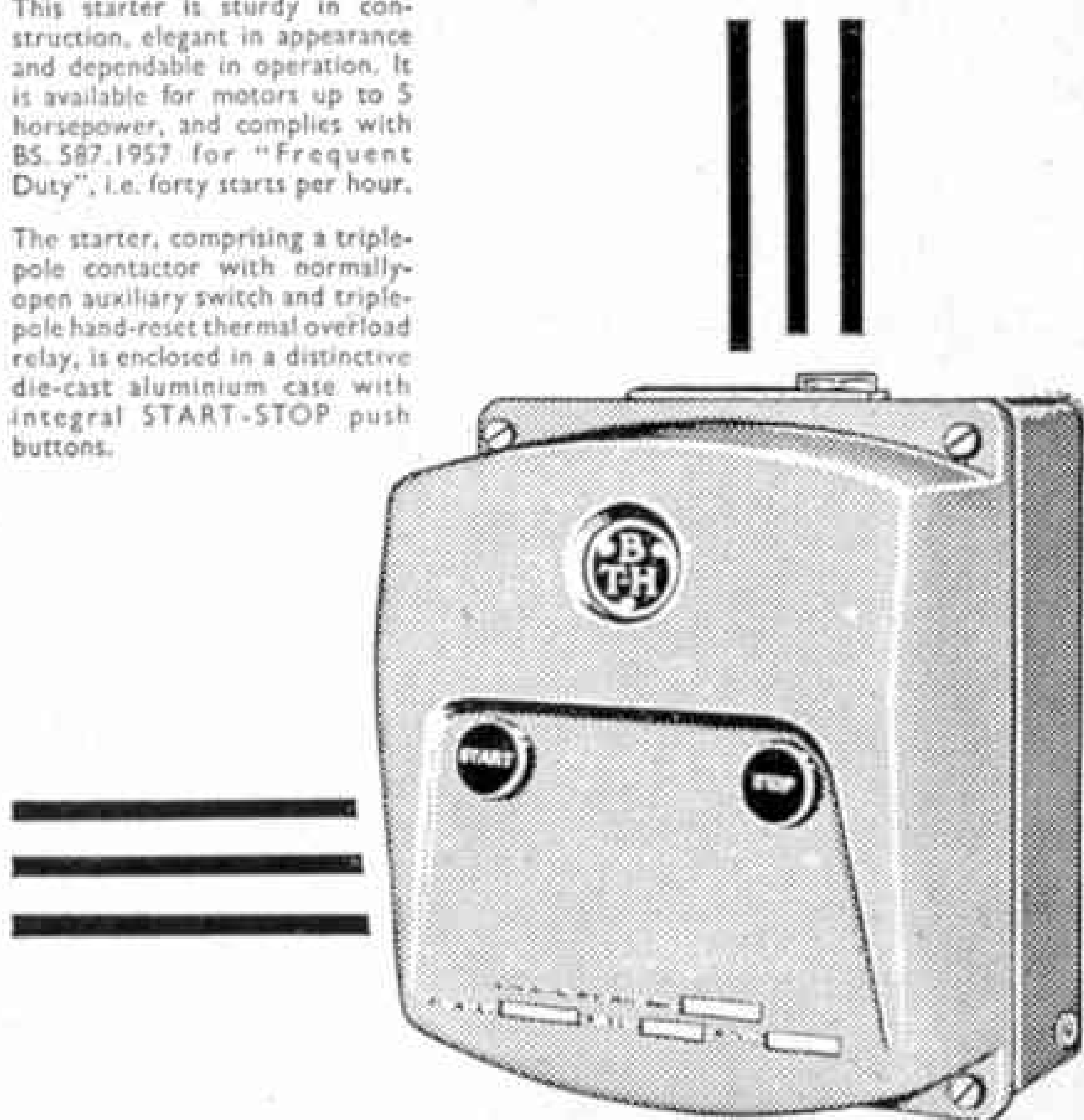
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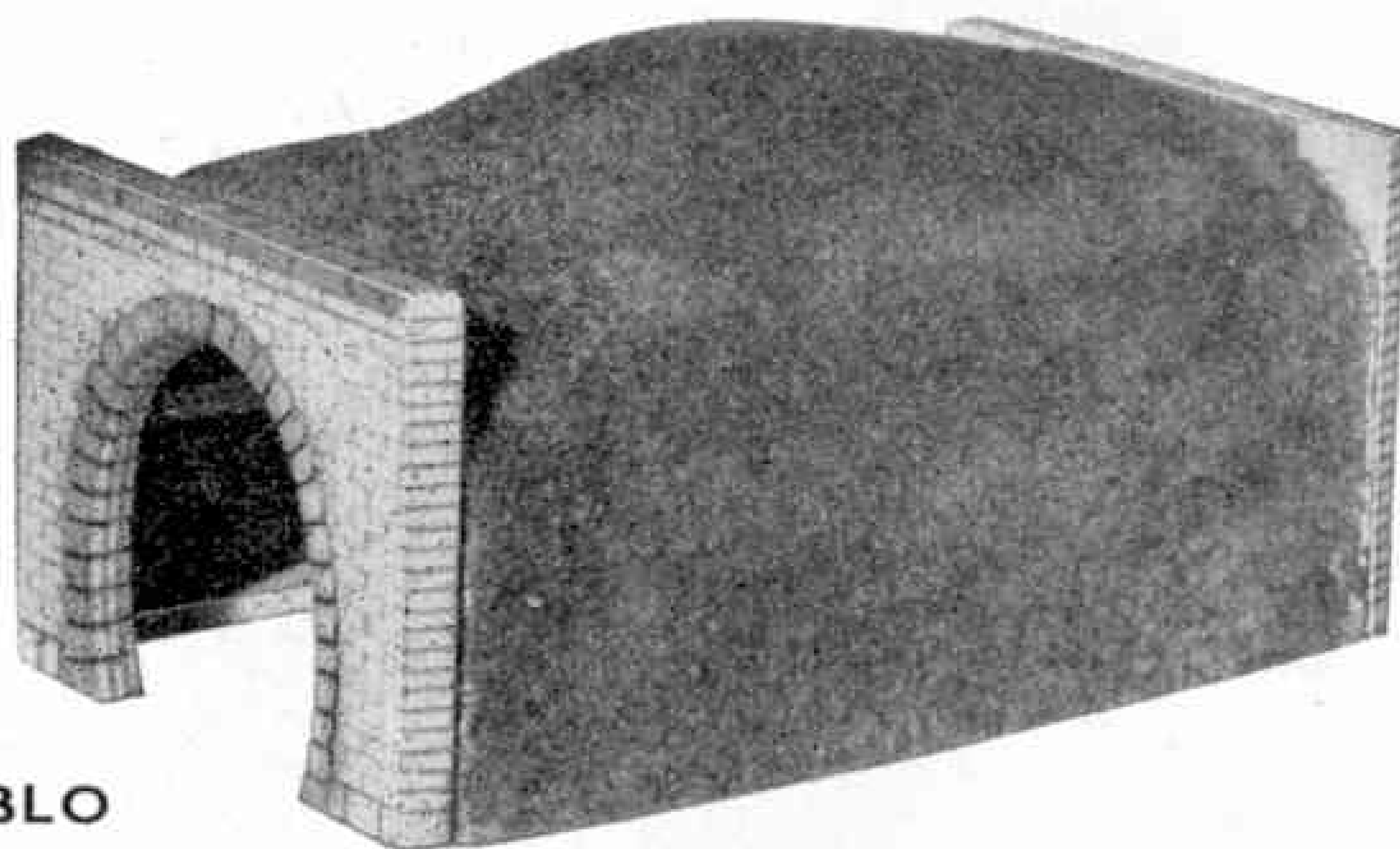
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AA.7/QP



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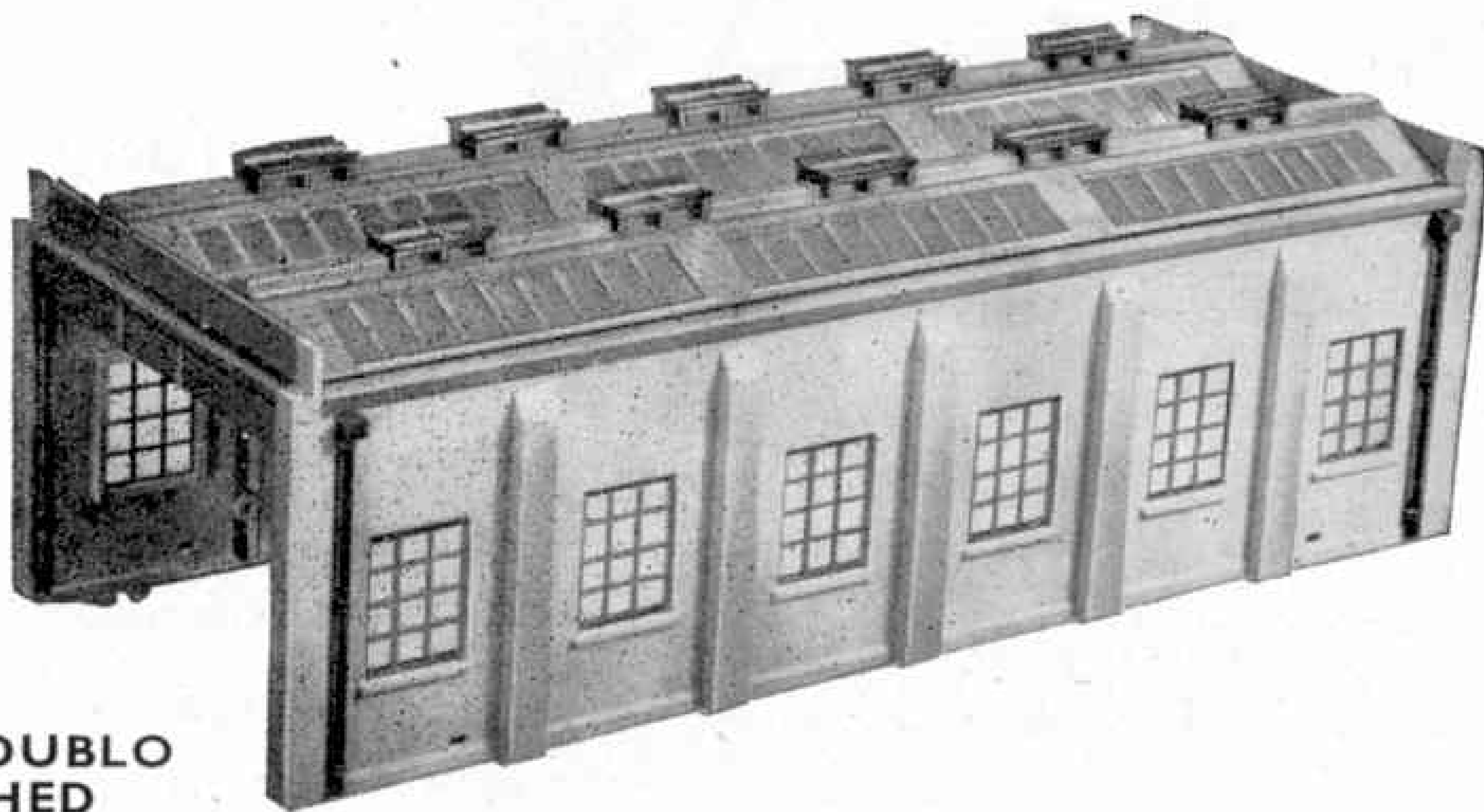
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Next Month: "THE NEW INDIAMAN"

MECCANO

MAGAZINE

Editorial Office:
Binns Road
Liverpool 13
England

EDITOR : FRANK RILEY, B.Sc.

Vol. XLIV
No. 9
September 1959

An Unwanted Record!

I AM sorry that this year a Magazine issue has been lost, the only time this has happened since the first *M.M.* appeared 43 years ago.

Owing to the dispute in the printing

before the strike halted printing. Since work restarted the remaining copies have been printed and distributed to dealers and newsagents, and any reader who has still not been able to obtain a copy can do

so by writing to the *M.M.* Publishing Department, as explained in the announcement on page 420.

You will no doubt recall that on the Editorial page of the June issue there was a picture of an apparently derelict concrete structure, and I asked readers to identify this. I was rather surprised to find how many were able to say that it was part of the foundations of a bridge across the Thames that was started almost 20 years ago. The bridge was planned before the war as part of a scheme for a road to by-pass Maidenhead. Work on the foundations had to be abandoned when the war broke out, and only now has it been found possible to proceed further with the project.

The first correct reply that reached me was that from A. F. Knight, London W.7, to whom I have awarded a prize of 10s. 6d. The next two were from D. Young, Hayes, and P. Thurston, to whom I have sent consolation prizes of 2s. 6d. each.

The Editor



Riding the footplate of a locomotive gives the full glamour of railway working, but a trip at the rear end of a goods train, in the brake van, is no less exciting for the enthusiast. A description of such a journey across the Mendips will appear in our October issue, and our picture shows the author with railwaymen during a stop at Evercreech Junction goods yard.

world, it was impossible to complete the issue that would normally have appeared in August, so here we make a new start with that for September and hope that there will never be such an interruption again. I trust that in the meantime all of you received your copies of the July *M.M.*, only a proportion of which had been issued

Fifty Years After Blériot

By John W. R. Taylor

AS you all know, it was 50 years ago this summer, on 25th July, 1909, to be precise, that a Frenchman named Louis Blériot made the first aeroplane flight across the English Channel. He flew in a monoplane which he designed and built himself, and took 37 minutes to get from Baraques, near Calais, to Dover. The distance between these two points as the crow flies is around 22 miles, giving an average speed of 36 m.p.h. But the aeroplanes of 1909 did not fly as straight as crows and were a good deal less reliable!

It was rare that an aero-engine could be persuaded to keep going for as long as 37 minutes; and when Blériot was blown off course and lost his way in mid-Channel he must have given up all hope of reaching England. He would certainly have been forced to "ditch" had he not run into a shower of rain at just the right moment to cool his overheated engine.

Even then he could not find sufficient power to climb over the white cliffs of Kent and had to fly along until he found a gap to slide through.

It was little wonder that flying the Channel remained a hazardous adventure for many years afterwards. Nobody attempted to open a passenger service, and the main lesson taught by Blériot's achievement seemed to be that Britain was no longer an island cut off from European wars, but could be attacked easily from the air.

Fortunately, when war did break out in 1914, most military aircraft were still

unarmed, and the only people who had much to fear were the pilots who had to fly the machines of the Royal Flying Corps over to France for reconnaissance duties with the British Expeditionary Force. They set out in their assortment of Blériot monoplanes, B.E.2s, Farmans, Avro 504s and B.E.8s, with motor car tyre inner tubes around their waists to serve as life-jackets if they were forced down at sea. Their only combat orders were to ram any Zeppelin they might encounter on the way — a far-from-cheering prospect as they had no parachutes.

In the four years that followed aviation made tremendous progress. Airframes and engines became so strong and reliable that a flight across the Channel could be faced with a fair degree of confidence. So, once the fighting was over aircraft manufacturers and ex-military pilots in Britain, France and other European countries looked forward to the promised boom in airline travel that would keep them in business.

As was often the case, the Royal Air Force led the way. Within a month of the signing of the Armistice with Germany, it formed the 86th (Communication) Wing to provide a speedy method of transport for members of the Government attending the Peace Conference in Paris. The service opened in January 1919, and in the next eight months the small fleet of converted D.H.4 and Handley Page 0/400 bombers made 749 flights between London and Paris, with an average flight time of 2½



Louis Blériot signalling to his wife from the quay at Dover.

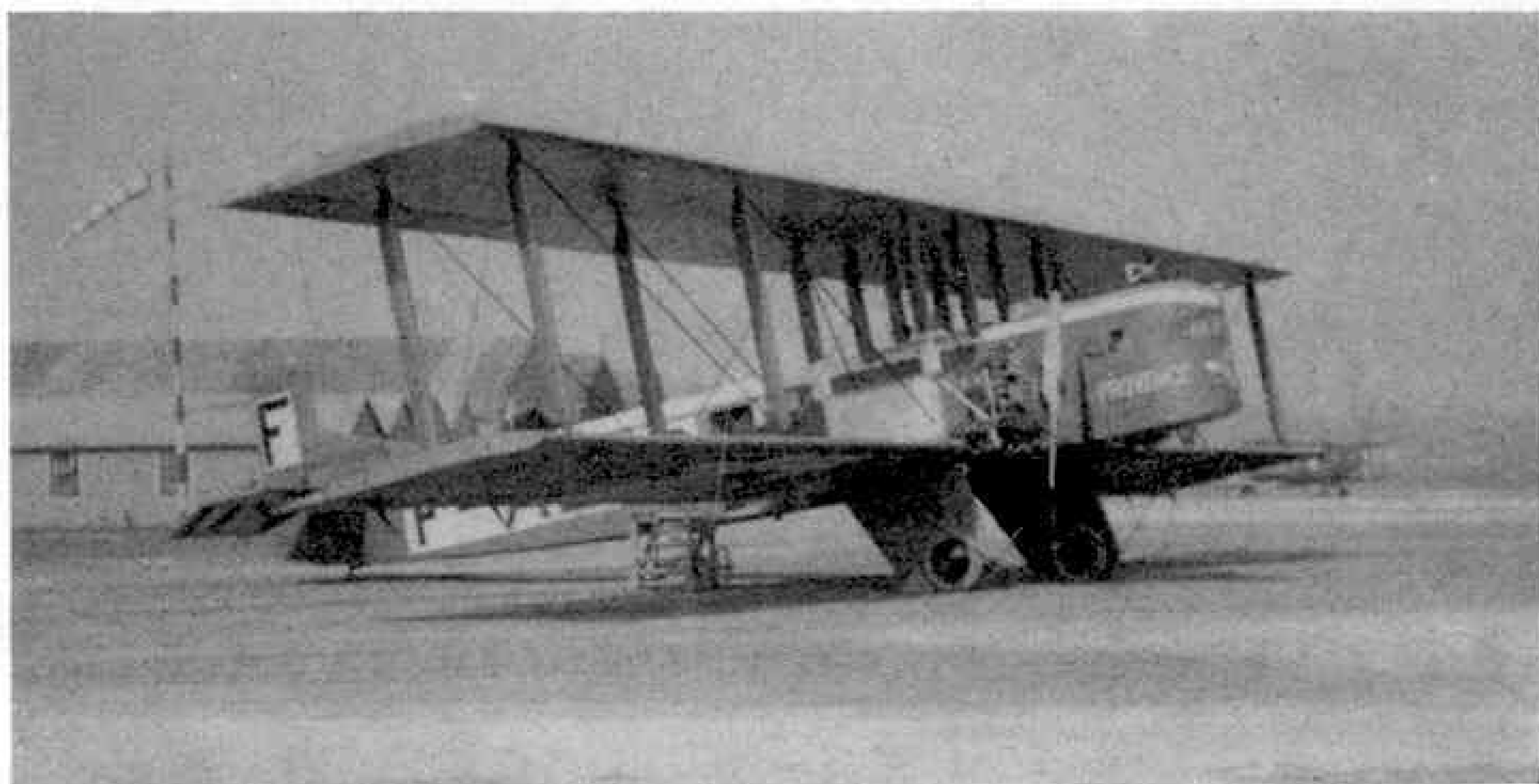
hours. In all they carried 934 passengers, 1,008 bags of mail and 46 despatches.

Civil flying was not permitted in Britain until 1st May, 1919, which prevented any airlines from competing with the R.A.F.; but the French Farman company found a way of jumping the gun on 8th February, by flying about a dozen *military* passengers from Toussus-le-Noble airfield, near Paris, to Kenley, near London, in a converted Goliath twin-engined bomber.

In the best French tradition, the passengers were made comfortable in a roomy enclosed cabin and were provided with a champagne lunch over the Channel.

Because the Farman company was one of those which combined in 1933 to form Air France, this great national airline can claim to have been in the passenger-carrying business longer than any of its competitors; but so far as the public were concerned cross-Channel flying did not start until 25th August, 1919—just 40

enough, and brave enough, to make the trip were led to a single-engined D.H.4, with two wicker seats crammed in the fuselage where the rear gunner had once been. After



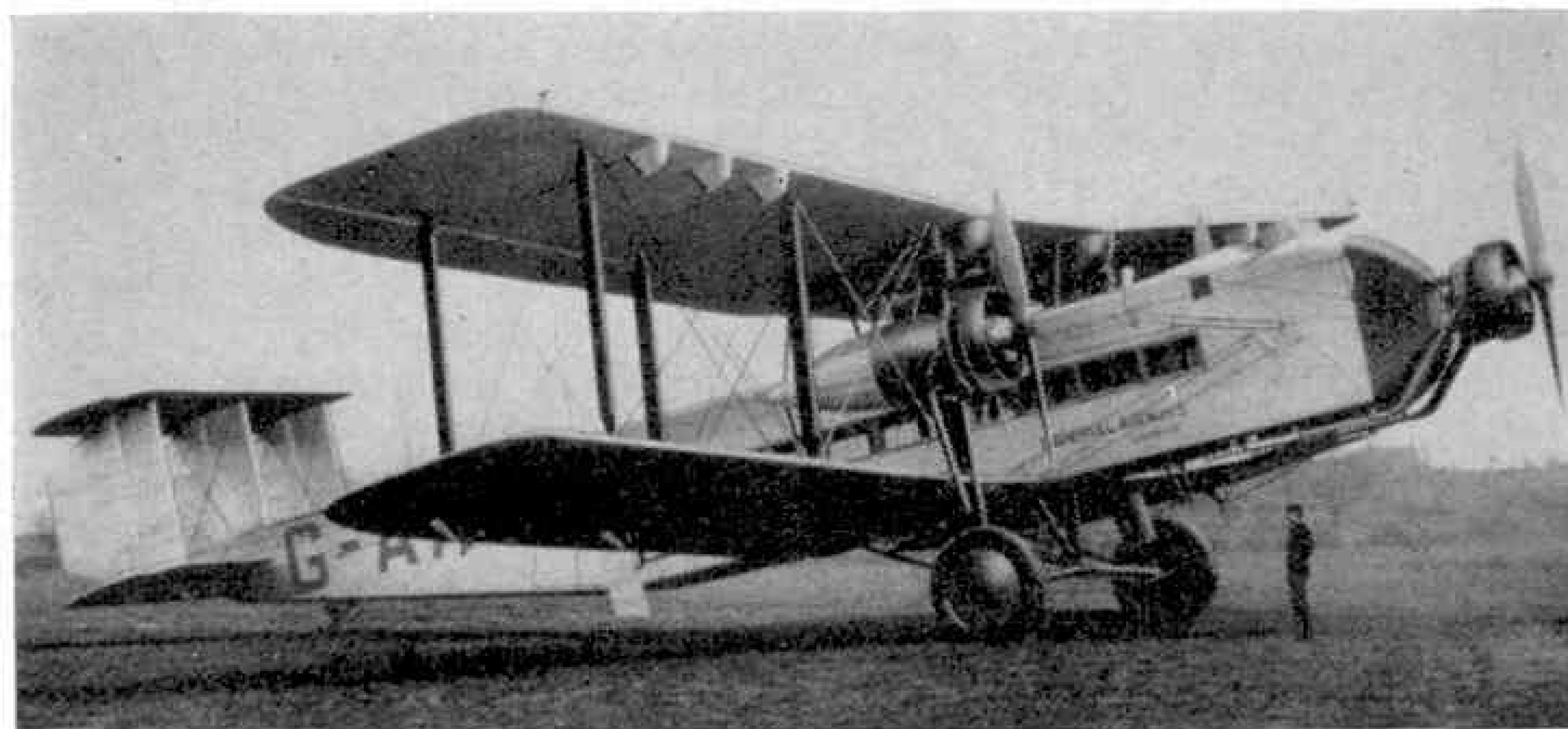
French Farman Goliath of the early 1920s.

muffling themselves in leather flying coats, gloves and helmets, they squeezed in, had a lid clapped down over their heads, and were off.

Despite all the discomforts, such a flight was an adventure to talk about for weeks afterwards, and the services proved surprisingly safe. They were not, alas, always on time. One pilot made no fewer than 22 forced landings *en route* to Paris, but he delivered his passengers in the end.

The beauty of the D.H.4 was that it flew slowly and could be put down in any decent-sized field; so even an engine failure was seldom serious.

Pilots were very much on their own once they had taken off. There was no radio and even the

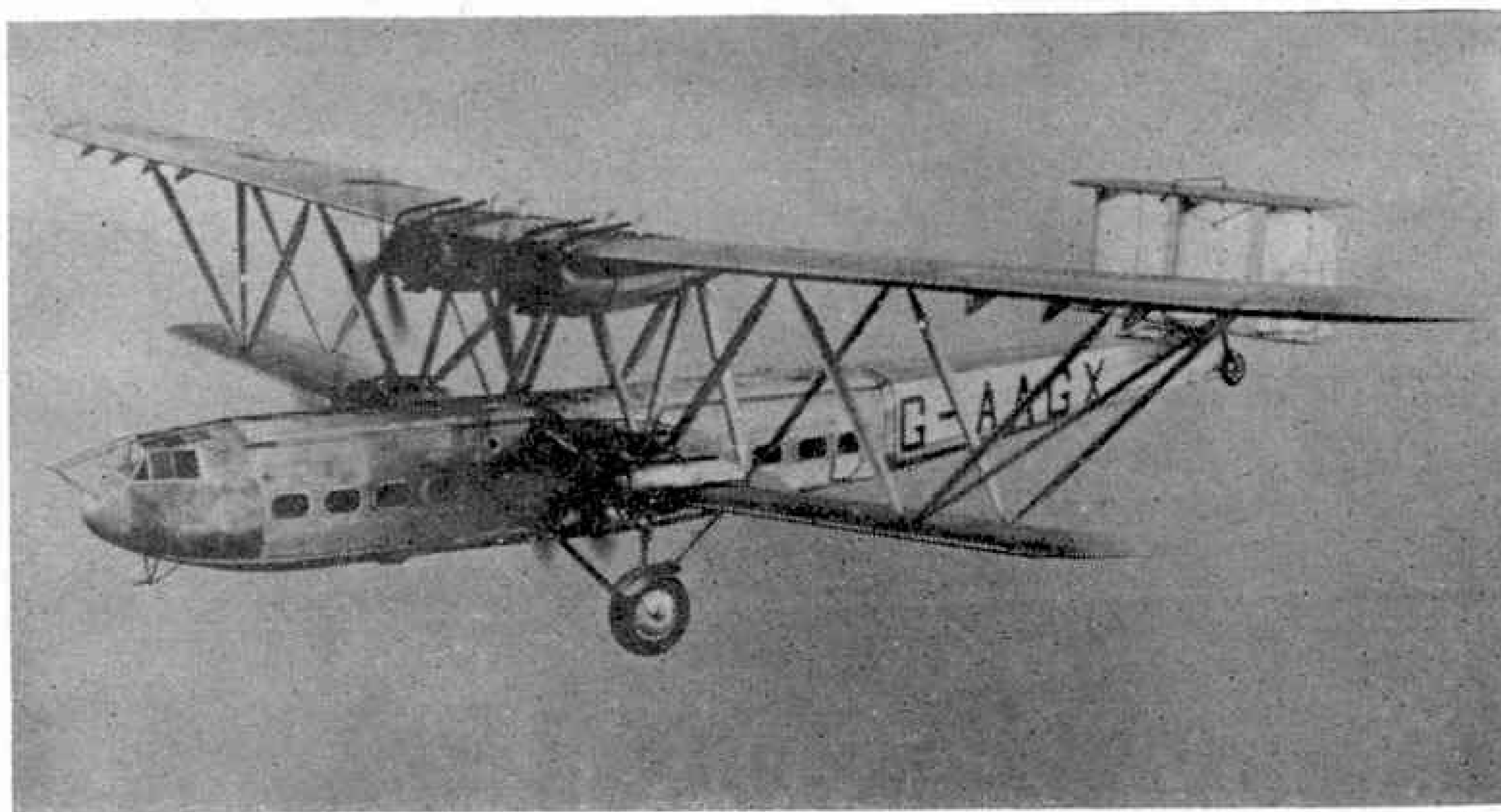


One of the three-engined Armstrong Whitworth Argosy biplanes of Imperial Airways.

years ago last month. When it did begin, the airline concerned was a British company named Aircraft Transport and Travel Ltd.

The single fare to Paris was fifteen guineas. Champagne lunches were not included and, although A. T. & T. also used converted bombers, they were much smaller than the Farman Goliath. Those wealthy

compass could seldom be trusted because there were so many metal parts near it in the aircraft. Navigation was simple. The pilot just looked over the side of his open cockpit and, instead of flying straight to his destination, followed landmarks that he could recognise, such as roads, railways and rivers. The only snag was that he had to fly away from railway lines if a train



At the time of its introduction, in 1931, the Handley Page H.P. 42 Hannibal was the largest aircraft built in this country. Imperial Airways had eight of these air liners, the four used on the London-Paris route being known as the Heracles class.

happened to be going in the same direction, because passengers were known to complain when trains overtook the slower aeroplanes.

Gradually, as the years went by, comfort, speed and safety were improved. Radio was introduced to help the pilot find his way. Larger aircraft, like the D.H. 34s operated by Daimler Airways in 1922, enabled the passengers to be served with refreshments in flight. By 1927, on Imperial Airways' *Silver Wing* service, passengers in Armstrong Whitworth Argosy biplanes were able to enjoy a full-course hot meal as they flew leisurely between Croydon and Paris at 95 m.p.h.

An even greater aeroplane followed in the shape of the four-motor Handley Page Heracles-class biplane. In this, for the first time, the pilots also had an enclosed cockpit and the old leather flying suits and goggles gave way to smart blue serge uniforms, peaked caps and gold braid. Airline flying had grown up. It was still not fast, but it was supremely safe. In fact the eight big Handley Pages of Imperial Airways each flew more than a million miles without hurting a passenger until the last of them disappeared without trace on a wartime flight.

In any case, speed is of little real value on short cross-Channel services. This can be seen easily if we think of the London-Paris route, because it takes longer to get from the centre of one city to the centre of the other now than it did 20 years ago, when aircraft flew only one-third as fast as a Viscount. The reason, of course, is that aircraft with greater speeds require longer runways, which have to be built far from the cities; so that more time is now spent riding in coaches on the ground than in flying through the air.

Nevertheless, there are few passengers who would exchange the comfort of a Viscount, flying high "over the weather", for even a Heracles. More important still, the fine air liners of today have brought down fares to the extent that one can fly to Paris and back for very much less than the single fare of the early 'twenties. If we take into account the purchasing power of the pound then and now, the present fare works out at little more than a tenth of that charged in 1919.

So far we have thought mainly in terms of London-to-Paris airline flights; but these account for only a small proportion of the present-day cross-Channel air traffic. Most exciting services of all are probably the car ferry flights pioneered by *Silver City* in 1948 and now handling one in five of all vehicles that travel over the short routes between Britain and the Continent. No matter how many times one flies on the big Bristol Freighter ferryplanes which link England and France in a mere 20 minutes, it always seems a miracle that two or three cars, plus assorted motor-cycles and scooters, are making the trip too in a hold forward of the comfortable passenger cabin.

Perhaps, however, the modern cross-Channel flights that would have delighted Blériot most are those made by young Frenchmen in single-seat lightplanes such as the *Druine Turbulent*. By building their aeroplanes themselves and setting out without radio, in open cockpits, with an engine of only 30 h.p., they can feel the sense of achievement that he must have felt and which we shall never know as we step from the luxurious pressurised cabin of a 300 m.p.h. air liner from which we saw nothing but clouds and a blue sky from take-off to touch-down.

Station on a Bridge

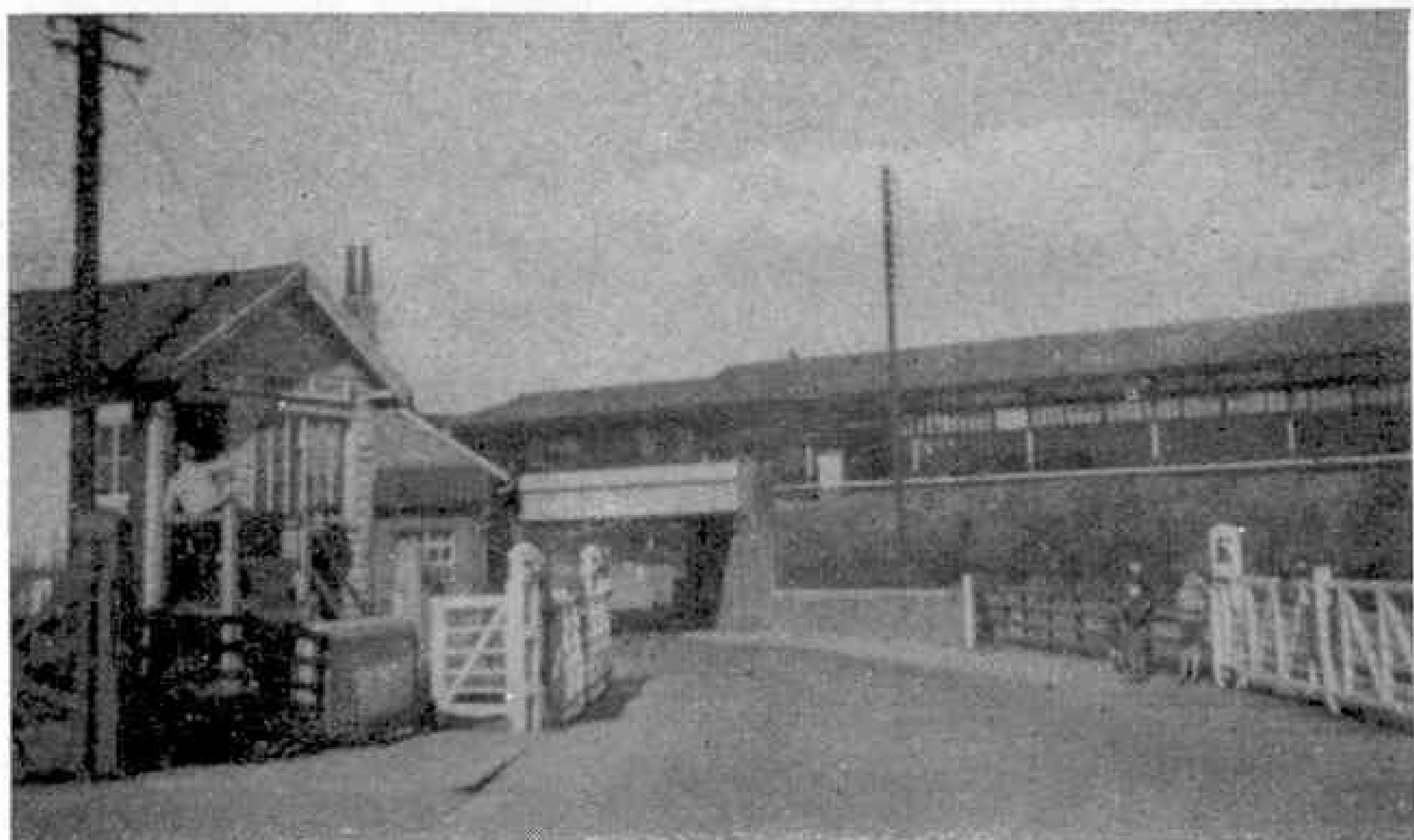
By J. Walkland

HAVE you ever heard of a railway station built on a bridge, not a branch line station, but one on the East Coast main line between Edinburgh and London? Northallerton, the County Town of the North Riding of Yorkshire has such a station. The upper part of the bridge structure, over the A167 road to Boroughbridge, can be seen between the tracks in the station, as is evident from the lower picture on this page, while the Refreshment Rooms are directly on the bridge.

Mr. Sanderson, the Stationmaster, told me that about 400 trains, including both goods and passenger, pass through Northallerton every 24 hours. We, who live there, are used to the sound of expresses dashing at over 70 miles an hour through the night—in fact we rarely hear them. But when my brother stayed here, every time he began to doze off, another train and yet another shrieked through the station and he was glad to see the dawn!

To the north of the station, towards

Darlington, there are the Wiske Moor troughs between the tracks from which expresses pick up water as they travel along at speed. The signal box in Northallerton is electrically operated, and



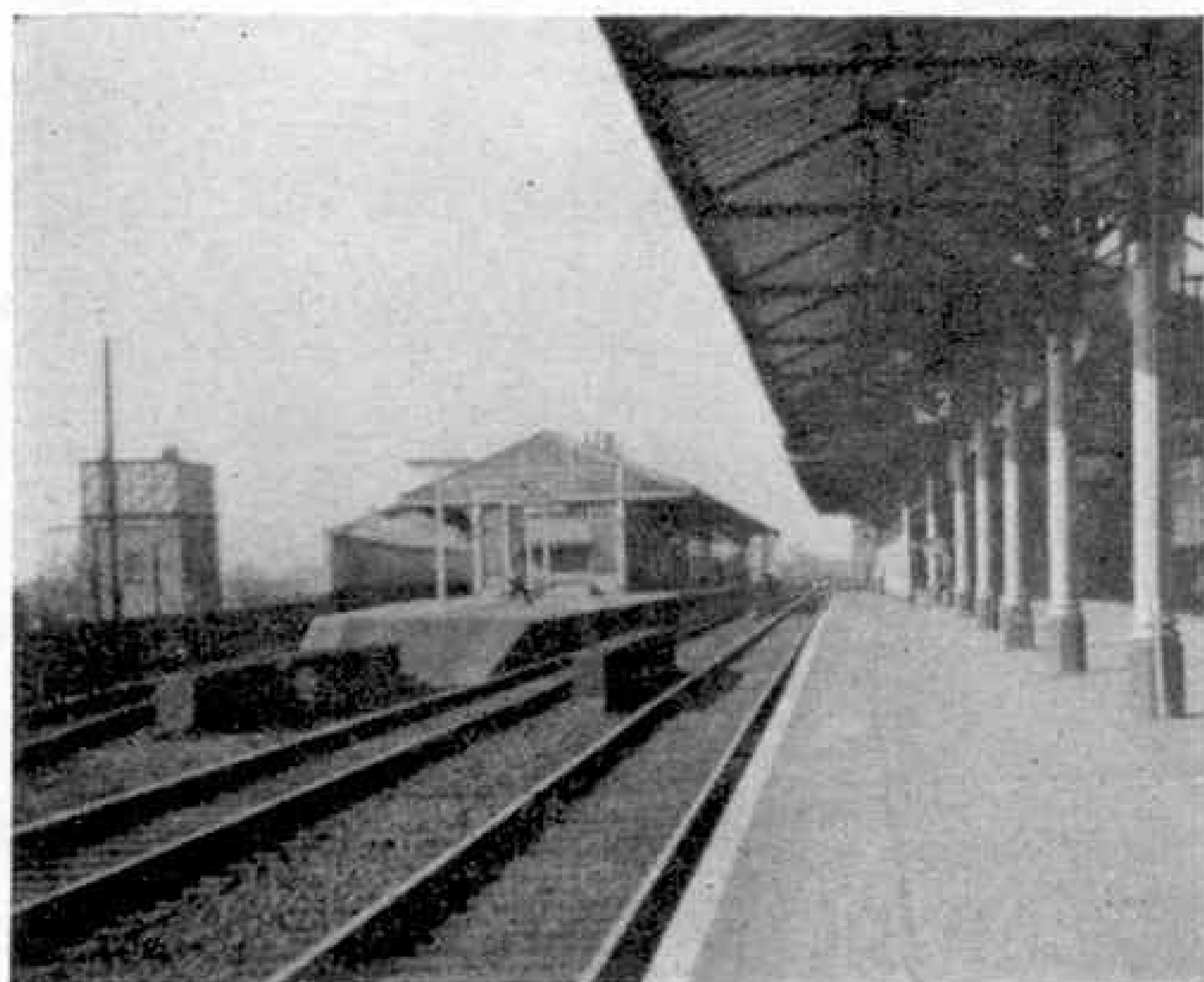
Over the bridge seen down the road the famous East Coast Route expresses run through Northallerton Station, which is built partly on the bridge.

automatic approach lighting colour light signals are used.

It is 393 miles by rail from London to Edinburgh by the East Coast main line, and Northallerton is just a few miles over half way. Many well known trains use this route; among these are *The Talisman*, *The Flying Scotsman*, *The Queen of Scots*, *The Heart of Midlothian*, *The Aberdonian* and *The Night Scotsman* all pass through this "station on a bridge."

To the north end of the platform there is the usual water supply for engines, with a tank to catch the surplus water. But even this tank is interesting, as it contains quite a few large goldfish. Their origin is somewhat hazy, but they have lived there for at least eight years.

Although there is no room for a garden beside the track, the wide approach from the town provides space for a beautifully kept lawn and flower-beds which add both dignity and colour to the station. Last year these secured the first prize for the best station garden in this area of the North Eastern Region.



The upper parts of the bridge structure can be seen in Northallerton station.



The David Brown Albion underground cable-laying machine at work on a sports ground. Photographs by courtesy of David Brown Tractor Division.

straw in fairly reasonable condition, but putting down the straw and raking it off again just before a match are both troublesome and costly. Another drawback is that very often seeds of coarse grasses and weeds are introduced into the ground, which may lead to deterioration of the turf.

The obvious way to avoid all difficulties is to heat the ground sufficiently to melt snow or ice on it. Until the beginning of the football season of 1958-9,

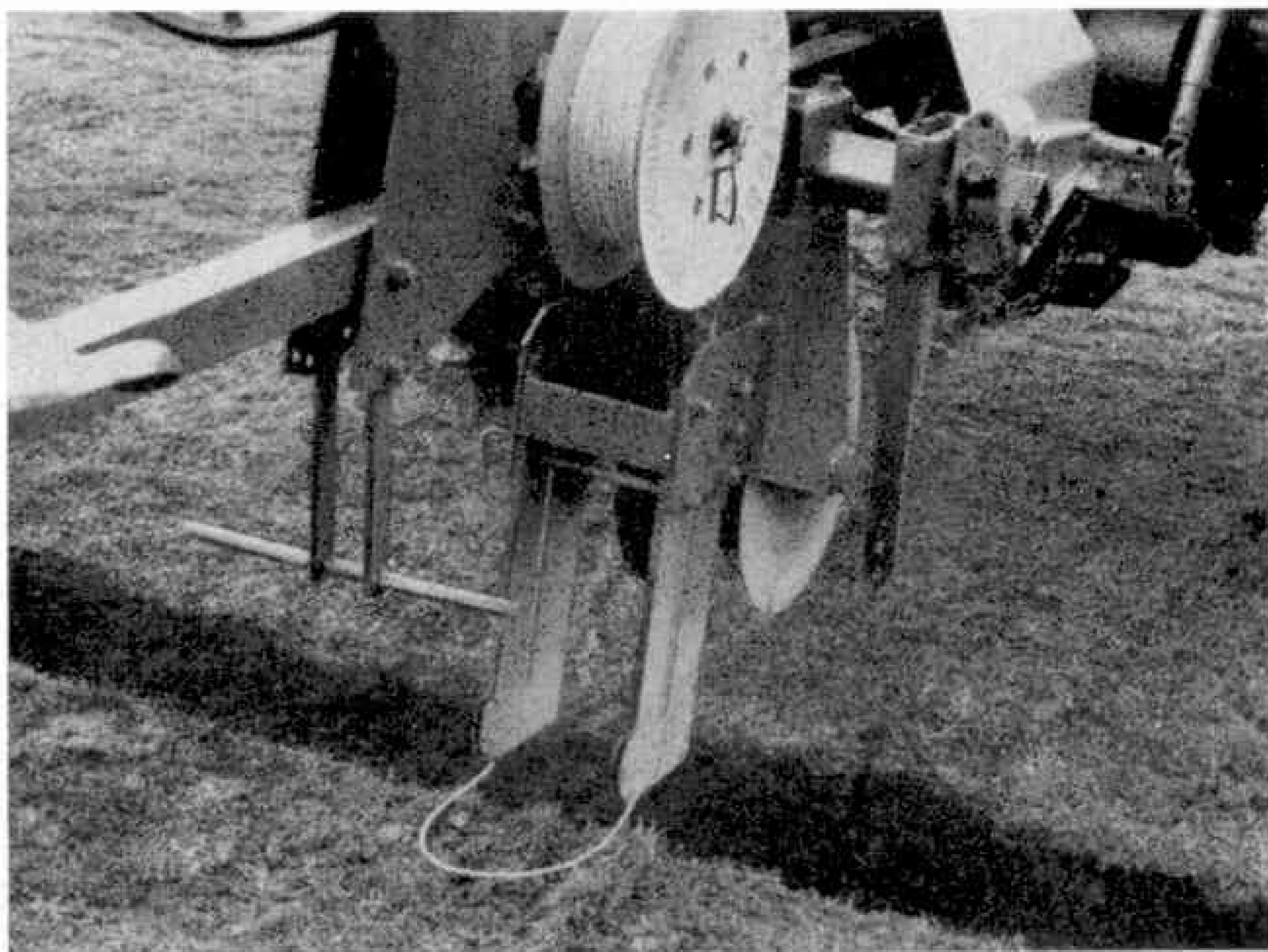
Electric Heaters for Sports Grounds

By the Editor

OUTDOOR winter games are always liable to be postponed in snowy or frosty weather. This applies particularly to Rugby and Association football. To play either of these games on a frozen pitch is liable to give rise to serious injuries from falls and other mishaps that normally would be of very little account.

At present, almost the only way used of preventing ground from becoming frozen too hard for play is to cover the surface thickly with straw. This is not really a good method. It may help to keep the ground beneath the

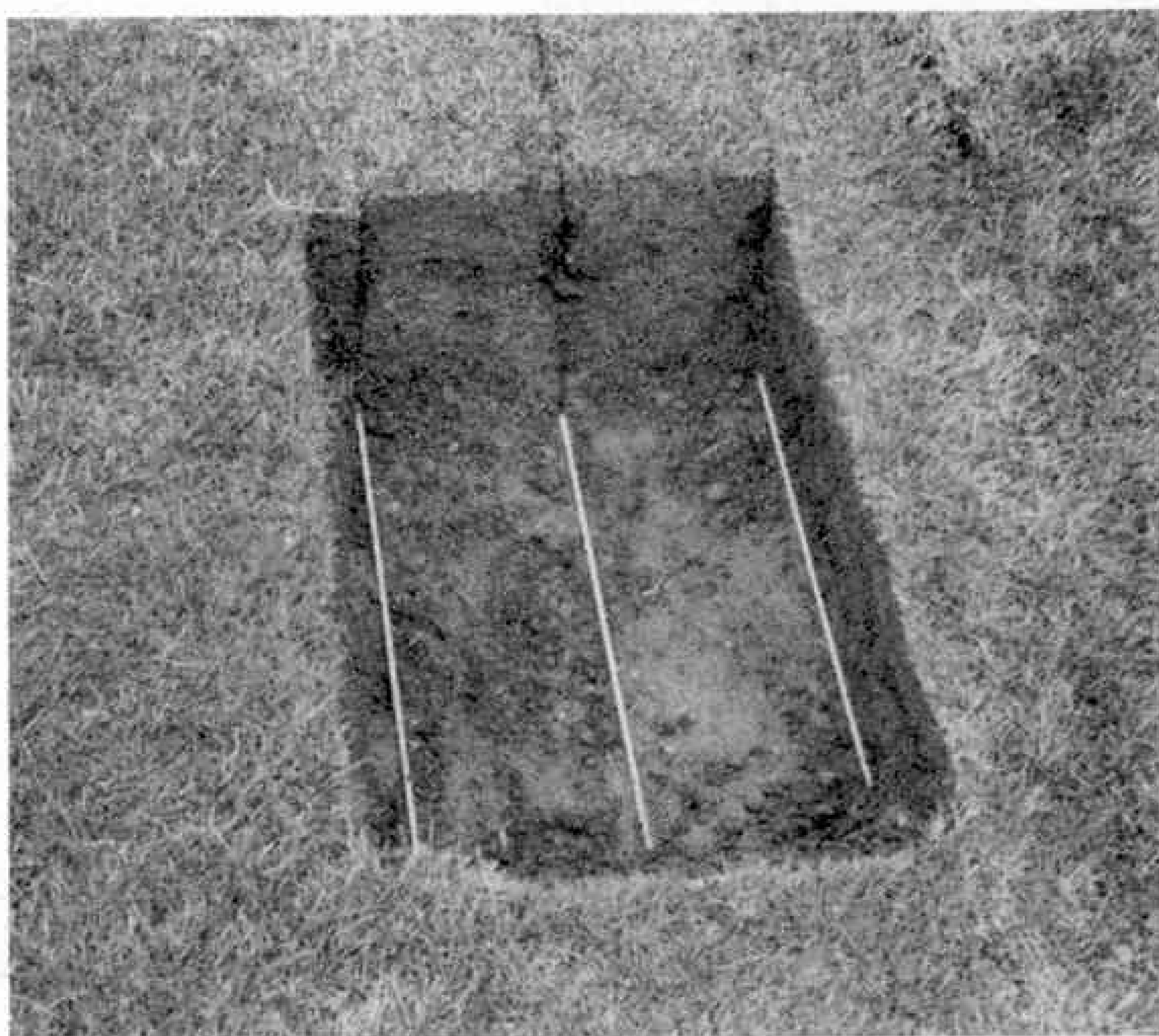
any suggestion to do this would have been regarded by most people as somewhat ridiculous. But then the Everton Football Club showed the way by actually transforming its ground into a gigantic electric



The cable-laying device ready for lowering at the beginning of a run, during which two parallel lengths of heating cable are laid.

heater with excellent results, for there were occasions when the club's ground was playable when most others in the surrounding district were not.

The work of laying the cables was done during the summer of 1958, when the whole of the top surface of the Goodison Park ground was being removed and new turf laid. If it were necessary to remove the whole of the upper surface to a sufficient depth, which seems to be not less than 6 in. to allow heating cable to be laid down, it is very unlikely that many clubs would adopt the system because of the cost.



The accuracy of the machine is shown in this picture, from a photograph taken with the top surface removed after cables had been laid.

Now, however, a machine has been devised for laying down the cables easily and quickly, and precisely where they are wanted, without removing any of the turf.

The introduction of this machine has changed the situation completely as far as both ease and cost are concerned. It has been estimated that with it the necessary cables, 30 to 35 miles of them for a full-sized football pitch, can be laid at a depth of 6 in. for about £400. This does not seem an unreasonably high sum in view of the fact that postponement of a game usually results in a loss of income from receipts at the gates.

The underground cable-laying machine is seen in the two pictures on the previous page. It has been designed by Harrison, McGregor and Guest Ltd., a subsidiary of the David Brown Tractor Division, Huddersfield, in

collaboration with Mr. J. R. Escritt, of the St. Ives Turf Research Station, Bingley, and Mr. J. Hack, of the Yorkshire Electricity Board.

The problem presented to the David Brown Company was to design a machine capable of laying lengths of cable about $\frac{3}{16}$ in. in diameter in lines $6\frac{3}{4}$ in. apart at a depth of 6 in. below ground level. It had to do this with such precision that no wire was more than $\frac{1}{4}$ in. away from its planned position, that the depth had to be uniform and that the entire operation could be carried out without damaging the turf.

With these stringent requirements, careful development work was of course essential, and this was carried out by the Engineering Department of Harrison, McGregor and Guest Ltd. The design eventually arrived at was a combination of the David Brown-Albion Steerage Hoe, and a combined ripper and mould drainer, with special attachments designed for feeding cable into this without doing any damage.

It was decided to lay two runs of cable at a time, at the required distance of $6\frac{3}{4}$ in. apart, leaving a loop at one side or one end of the field, as shown in the lower picture on the opposite page. This procedure was perfectly suitable for the electric installation involved.

The machine was designed for towing behind a standard David Brown 950 tractor. A pointer on the front axle of this enables the driver to follow a straight course, and a similar pointer aids the operator of the cable-laying machine to adjust his course in the same way.

The pictures show generally how the machine works. There are two vertical blades that cut narrow slits 6 in. deep in the turf, through which the plastic-covered cable is laid. The surface cuts are scarcely visible, but in any case they are easily closed up by rolling after the laying has been completed.

How successful the machine is can be seen from the picture on this page, which was taken after the demonstration of its working at the St. Ives Research Station. The cables had been laid strictly in accordance with the exacting requirements already noted.



L.M.R. class 5 4-6-0 No. 44711 on an up train of empty stock near Bushey.
Photograph by G. R. Mortimer.

Railway Notes

By R. A. H. Weight

Fast Running by L.M.R. 4-6-0s

A large proportion of principal express running along the ex-L.M.S. lines in England and Scotland is still sustained by 4-6-0 steam locomotives, with much good work done, as the following examples show.

Beginning with the largest 7P rebuilt Royal Scots, No. 46107 *Argyll and Sutherland Highlander*, on the afternoon Perth-Euston express with a moderate 9-coach load, about 325 tons full, gained 1½ min. on a smart timing from Carstairs Junction southward over the Border to Carlisle, running the 73½ miles in 74½ min. start to stop, although observing three track-repair slowings. The first of those was well up the climb to Beattock summit, which is not as arduous as that facing northbound trains on the other side.

In this case, down the long hill an average of 80 m.p.h. was maintained for 20 miles with a maximum of 87, so getting time in hand. South of Beattock this is one of the fast running sections of the West Coast route. So, over a much longer extent, is the Crewe-Euston length of 158 miles, for the most part easily graded with fast schedules applying, though for the time being extra allowances are given to a number of the expresses to cover modernisation and pre-electrification structural work necessitating speed restrictions.

No. 46119 *Lancashire Fusilier*, with "11-on" or about 385 tons, took the morning Euston to Glasgow and Perth summer express, calling at principal stations, down to Rugby, and forward to the second stop at Crewe, and did this comfortably within the present timing in bad weather, although observing six extra slowings, the last two being signal checks. Including one of the latter, the 65 miles between Brinklow and

Betley Road—the greater part of the 75½-mile Rugby-Crewe journey—were covered in less than an hour, with a maximum of 81 m.p.h.

I recently boarded the 1.35 p.m. Nottingham-St. Pancras express which had come from Bradford and Leeds, with restaurant cars added at Sheffield, as I wished to log the very fast 70-minute timetable run for the last 72 miles from Kettering start. The rostered Scot 4-6-0 not being available, 6P No. 45622 *Nyasaland* was substituted, assisted by class 5 mixed traffic No. 45088, as the 10-coach train of modern stock was beyond the "Special Limit" load for a Jubilee.

Leaving a little late along a route featuring varying gradients, tunnels, cuttings, viaducts and bridges, speeds ranged from 52 to 76 m.p.h., apart from service slack past Melton Mowbray and a long signal slowing through the tunnel

approaching Manton in Rutland that caused some delay.

Restarting from Kettering on the main line after lunch was over, at 2.36, 3 min. behind time, the two engines set to work with great vigour providing decidedly my fastest Midland line run of its kind so far. After breasting Sharnbrook summit, the top of a 1 in 119 rise, at 60 m.p.h., and passing Bedford at 82 and Ampthill at 72, regulators were opened wider raising the speed steadily up the longer though slighter gradient past Harlington to 77 m.p.h., falling only to 70-70½ at the top before Luton.

As we were now before time there was no need for any very high speed such as one sometimes logs in these tightly timed trains on the descents between St. Albans and Hendon; the maximum was 77½, but we had averaged nearly 74 m.p.h. for 50 miles and on entering the London area at West Hampstead had covered over 68 miles in an hour from Kettering start. Adverse signals pulled us up at Kentish Town, 1½ miles from St. Pancras; nevertheless we were at the terminus within the 70 min. allowance only a little after booked arrival time.

Jubilee No. 45656 *Cochrane*, from Sheffield with "8-on", made up for lost time running the 49½ miles Bedford-St. Pancras start to stop in 50½ min., being allowed only 52. Maximum speeds between St. Albans and Hendon were 88/84 and uphill work was lively. This was the 5.45 p.m. arrival at St. Pancras.

Messrs. Harvey, Pettitt and Tibbett kindly supplied some of these details.

Locomotive News Miscellany

New locomotives lately added to stock included steam class 9 2-10-0s, Nos. 92203-7, allocated to 82B, Bristol, St. Philip's Marsh. Nos. 92207-9 have also been completed. With diesel-hydraulic propulsion, B-B Warship class Nos. D804, *Avenger*, D805, *Benbow*, D806, *Cambrian*, D807, *Caradoc*, D808, *Centaur*, went mainly to 83D, Laira, Plymouth; main line electric for Kent coast service, Nos. E5001-7, to 73A, Stewarts Lane, London.

Diesel-electric locomotives: Type 4 1 Co-Co 1, 2,300 h.p. express Nos. D210-4, 1A, Willesden, with others following rapidly; type 2 English Electric 1,100 h.p. mixed traffic known as the "small Deltics", Nos. D5903-9, and 1,000 h.p. North British Locomotive Co series Nos. D6108-9, to 34B, Hornsey, G. N. Line.

Co-Bo 1,200 h.p. Nos. D5715-7, 17A, Derby; Brush Traction Ltd. A1A-A1A 1,365 h.p. Nos. D5525 upward to the G.E. Line, E.R.

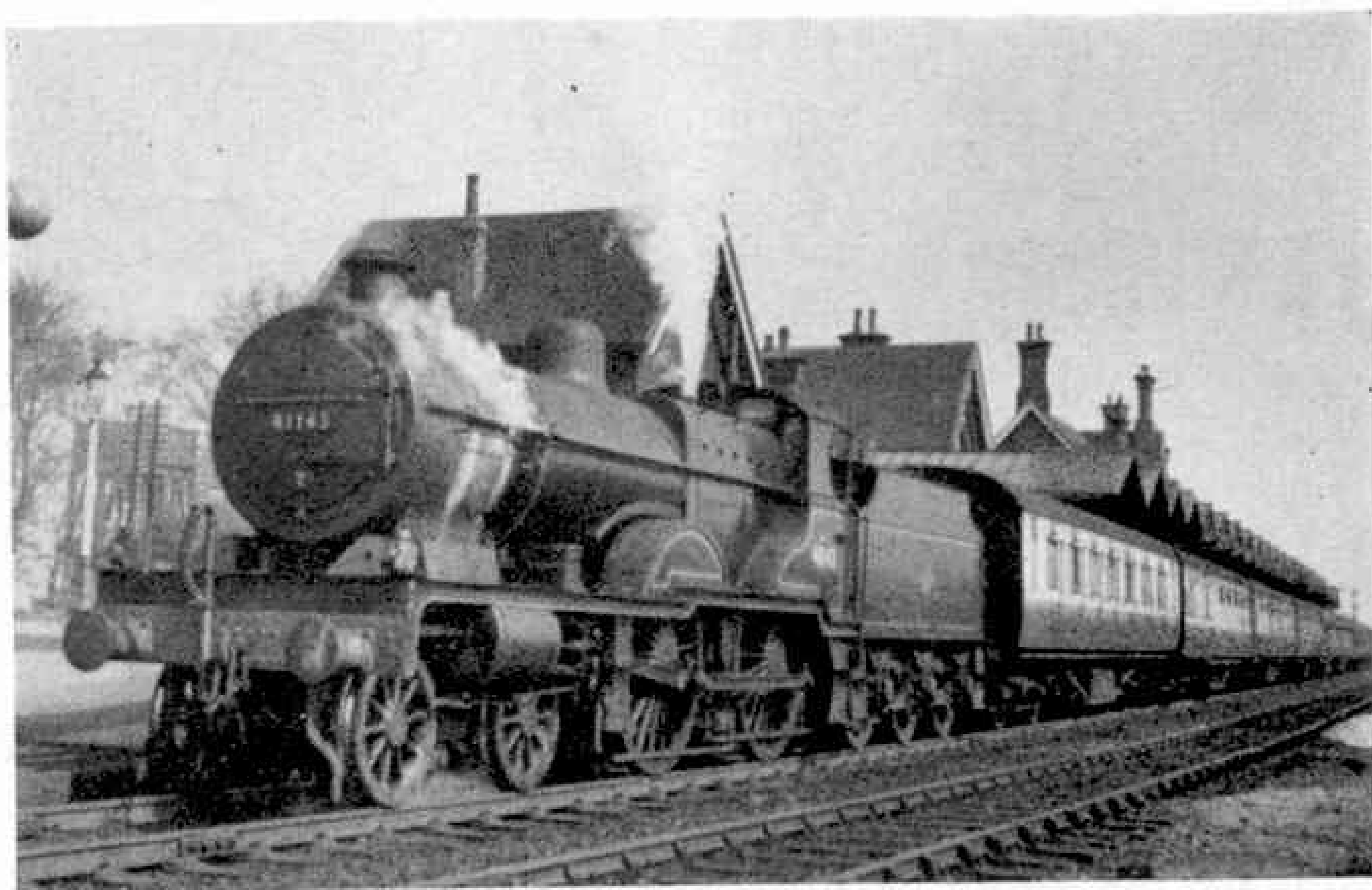
Bo-Bo 1,160 h.p. built by Birmingham Railway Carriage and Wagon Co., Nos. D5320-1 have been allocated to Leith, Central, and D5328-32 to 64B, Haymarket, Edinburgh. More of the similar ones completed at the B.R. Derby Works, numbered in the D5011 series, are on loan to the S.R. at Hither Green, etc. Further examples are coming into service, together with batches of diesel-electric, diesel-hydraulic and diesel-mechanical shunting or light mixed traffic units for various depots.

Among the withdrawn locomotives intended for scrapping recently announced was E.R. 4-6-4

No. 60700. This powerful express engine was a lone example and had been rebuilt from the experimental compound high-pressure No. 10000. W.R. No. 4900 *Saint Martin*, also withdrawn, originally one of the 6 ft. 8½ in. express class, was rebuilt in 1924 with 6 ft. driving wheels as a prototype mixed traffic 4-6-0, leading to the successful standardisation of the Hall class, of which over 250 were constructed between 1928 and recent years.

Some of the names hitherto carried by S.R. King Arthurs now withdrawn are being transferred to standard class 5 4-6-0s working on the Southern Region. A number of the electric locomotives that haul all trains over the steeply graded former Great Central, Sheffield-Manchester route, are to be named.

It was good to hear that former Great North of Scotland 4-4-0 *Gordon Highlander* is now in the original G.N.S. green finish, lettering etc. as No. 49. It was withdrawn as class D40 No. 62277. Good news too was that the much-longer stored pioneer Compound 4-4-0 of Midland Railway design has re-emerged in its native style as M.R. No. 1000, for service at the head of



A Standard Compound 4-4-0 of the former L.M.S. No. 41143 stands at Trent, a junction station where many routes converge. Photograph by T. G. Hepburn.

enthusiasts' special trains or the like. There might be one or two other welcome re-activations before long too.

Much Railway Interest in Nottinghamshire

The principal L.M.R. station in the city of Nottingham is laid out spaciouly for east and west running. Trains for London by the shortest route, like the 1.35 p.m. mentioned earlier in these notes, start off to the east though they can depart westward and travel via the Trent Junction network and Leicester. For the north they go off at the west end as for Derby and Manchester.

There are a number of alternative routes and connecting links within a radius of, say, 30 miles serving several important cities and towns, large collieries and industrial areas. By viaduct, the ex-Great Central Marylebone main lines are carried over the top of the Midland station, running north and south. Not far away the former G.N.R. (Great Northern Line) tracks also bridge over and merge into them serving the other chief station, Victoria, E.R. There is considerable cross-country passenger and freight traffic.

Leaving Nottingham, Midland, eastward also is the old-established secondary line to Lincoln which crosses the East Coast main line on the level near Newark. Regular interval diesel trains provide most of the passenger service. While travelling in one I noted a number of Trespass Warning or similar notices at country stations still headed "Midland Railway", and was rather charmed by an old one at Burton Joyce decreeing that "Horsemen must not use the Wicket Gate"!

Readers may remember a good picture in the December 1957 *M.M.* showing the Southwell branch train consisting of one coach worked as a push-and-pull by veteran Midland 0-4-4T. The service has been discontinued unfortunately, though freight trains still go through Southwell and can approach from east or west via a triangular junction. While opportunity remained, I travelled each way behind or ahead of No. 58065, one of the last of its type now existing, in the branch train to and from Rolleston Junction.

While there I saw two 2-10-0s on a special trial freight train.



Diesel power on the Western Region is well represented in this view of D 601 "Ark Royal", a diesel-hydraulic locomotive at the head of the "Cornish Riviera Express." Photograph by M. W. Earley.

Phillumeny



By
I. M. Inman

The title of this article is a word that will not be familiar to many readers. It isn't in Webster's or Chamber's dictionary, but it is easy to understand it as the study of light, just as philately means the study of stamps. Actually phillumenists—I hope I have got that name right—are interested in matchbox labels, which is not quite the same thing. The hobby of collecting these labels is an interesting one, however, and here is a short article about it, with pictures of a few interesting labels, by the Vice-President of The British Matchbox Label and Booklet Society.—The Editor.

HAVE you ever thought of adding yet another hobby to your spare time? If you are looking for one I can assure you that matchbox collecting is a most fascinating and interesting one. From it one can learn much about the languages and customs of other countries, and historical events in them, for these are depicted on the matchboxes of many lands, some of which are really works of art, well designed and beautifully coloured.

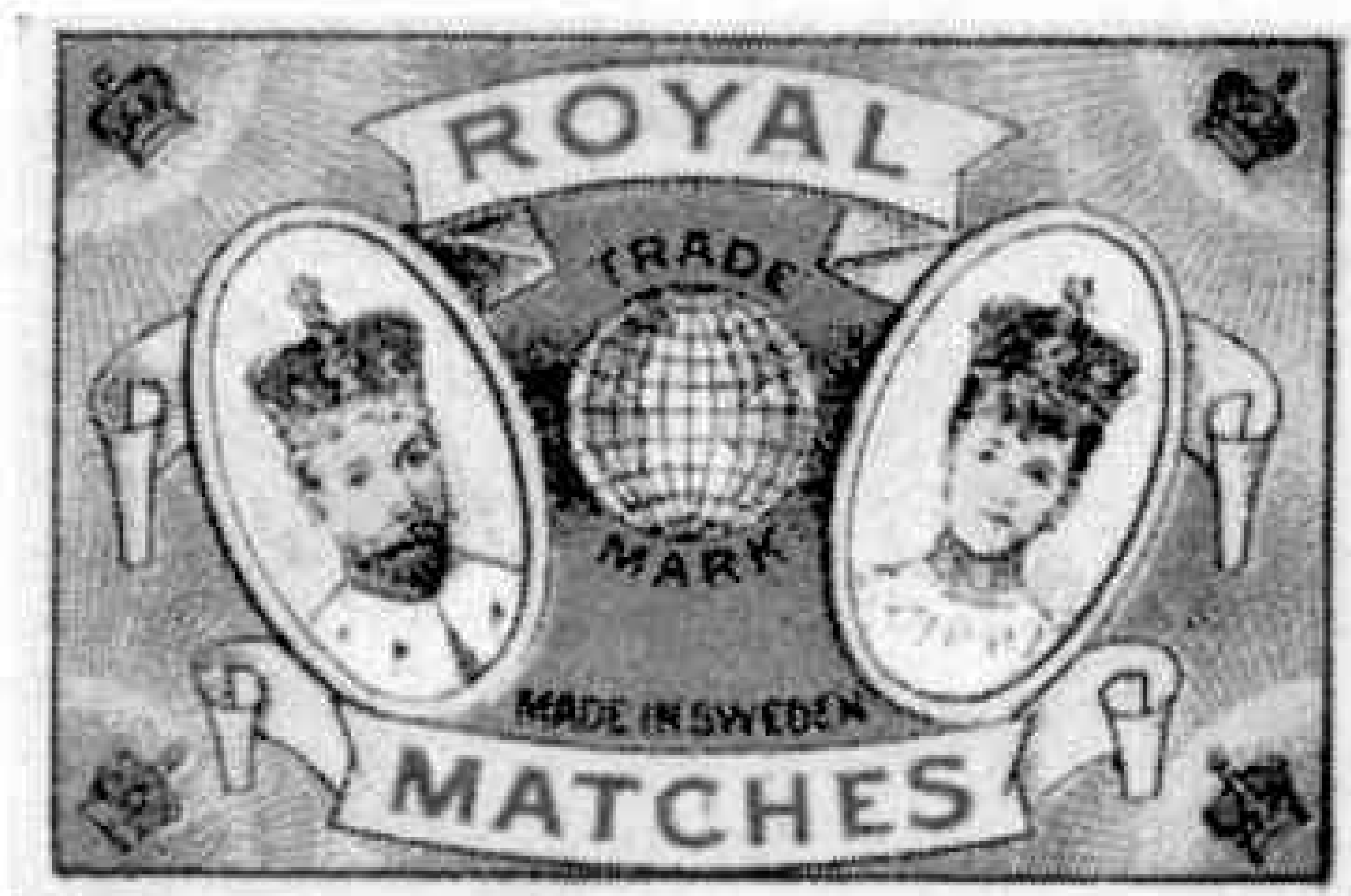
To give examples, quite recently from Japan there came a lovely set of 55 labels called "The Takaido Road", and these were well sought after by collectors. The series illustrates scenes along a 300-mile stretch of the Eastern seaboard of Japan, covering the full journey between Yedo and Kyoto. The original pictures reproduced on the labels were painted by Hirosheje Ando, a well-known artist of a century ago. Another very unusual series is called the Java Fairy Tale Story. This is a set of 45, and the funny little figures seen on the labels that tell the story make another series that collectors seek after.

Italy quite recently sent over sets of flowers, on spring flap boxes, and also small

cylindrical-shaped boxes that contained matches with heads of various colours. The labels carry pictures of fish, flowers and other colourful subjects and are all very attractive. India has many labels showing pictures associated with Oriental mythology.

Gandhi also appears on their labels. Many Indian labels depict elephants, and there is one in various colours named *The Duel*, from Kipling's *Elephant Child* in his *Just So* stories.

Then there are the personnel boxes. On these many labels introduce Royal scenes, such as the marriage of the Crown Prince of Denmark to Princess Ingrid of Sweden. Royal portraits too appear. Thus an old English label shows Queen Victoria and Prince Albert in 1842, another the Prince of Wales and Princess Alexandra of Denmark, on the occasion of their marriage in 1863, and there are many more like them. There is indeed scarcely a subject one can mention that is not depicted on matchbox tops, and of course in these modern times Russia





sends out sets illustrating that country's Sputnik programmes, one of the designs depicting the little dog *Laika* that attained fame by its journey into the upper atmosphere. And so one could go on about this hobby, which every week seems to bring out

something new for the collector, from many countries.

Various ways of keeping a collection are followed: Some collectors prefer to arrange them by subjects, others by countries and some even in alphabetical order of some kind.

Whichever way is adopted, the labels always look attractive. A society has been formed in connection with the hobby. It is The British Matchbox Label and Booklet Society and it does all it can for the benefit of those interested in this hobby.

The amazingly international subject character of matchbox collecting is very aptly expressed by J. Abraham in his book called *Surgeons' Log*, in the words of one of his characters: *I've just bought these—they're Swedish matches, printed in English, with the figure of an Arab on them, sold by a Chinaman in a Malay bazaar to an Irishman working for an English Company in a Dutch Colony!* Those engaged in the hobby make many pen friends in nearly every country in the world, and at various meetings held by the Society up and down England, there is always something new for them to see and new friends to make. There is always someone willing to "swop" labels with the enthusiast, and new places and towns visited are made a little more interesting by efforts to find out "what sort of matchboxes are sold there." One finds

new issues, new pictures and new stories almost daily. Whatever one is attracted by — animals, buildings, people, flowers, trains, ships, planes, etc., etc. — something connected with them will be found on matchbox labels.

The British Matchbox Label and Booklet Society was formed as recently as 1945 by a small number of collectors to promote the hobby and to assist all collectors. Its membership grew very rapidly, and nowadays covers a very wide range of countries. It is an amateur society, being run entirely by amateurs, and all its income is devoted to the provision of facilities for the benefit of members.

Among these provisions is a list of names and addresses of members, with particulars of the kinds of labels they collect. This helps to make easy the exchange of labels and of ideas on collecting. A publication called *The Society Newsletter* is

posted free to members about six times a year. This includes articles on the hobby, with illustrations that are helpful to beginners as well as experts, and it is claimed that the *Newsletter* is the most comprehensive and elaborate match hobby publication so far produced anywhere. Announcements too are made in it of all events of interest, and reports of meetings help considerably in keeping members in touch with developments in the hobby.

An Annual Exhibition also is held, while several Rallies in London are organised every year. All the displays at the Exhibition are staged by members, and informal auctions frequently held at Rallies give members opportunities of improving their collections.



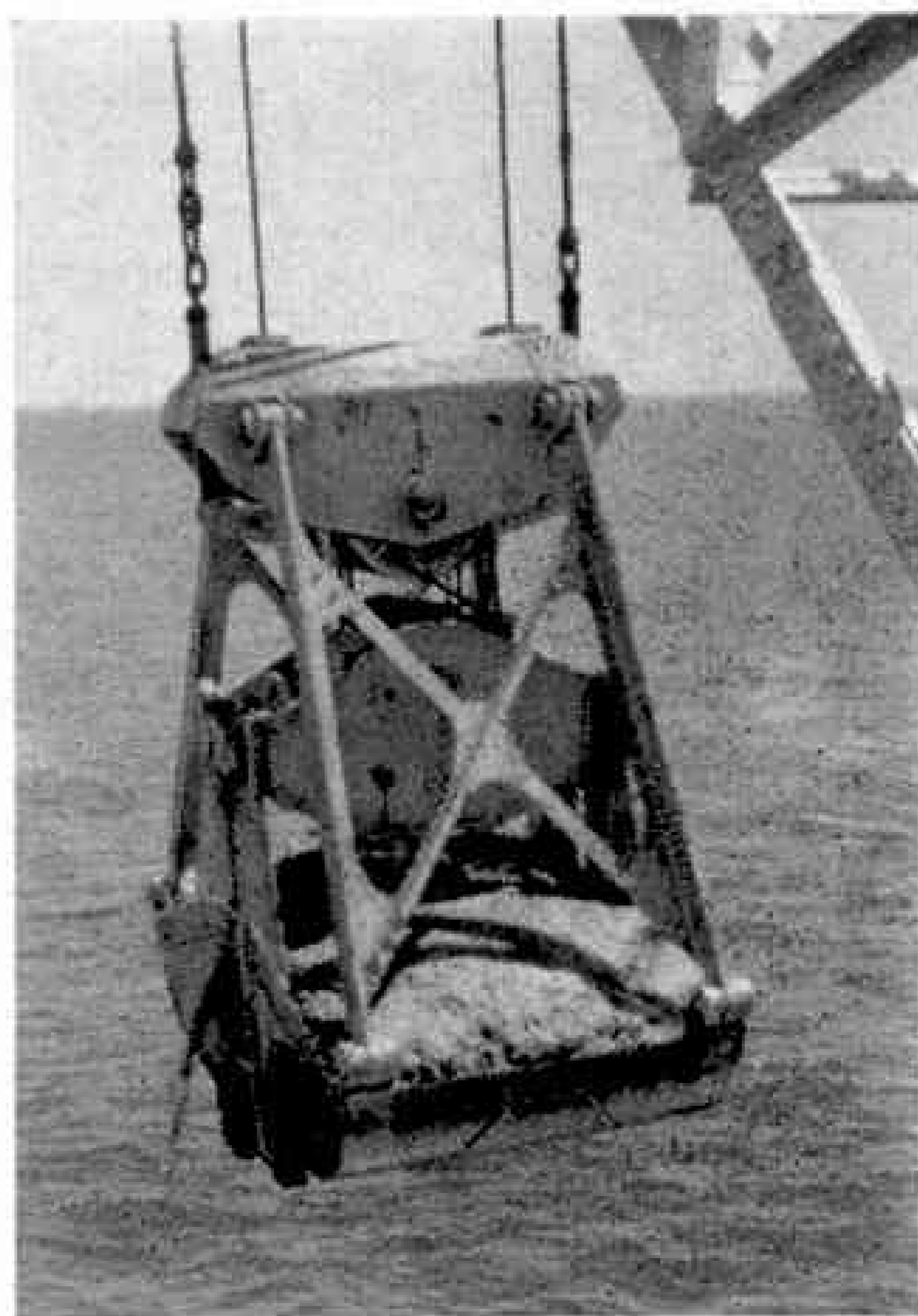
From Tanker To Tin Dredge

OUR cover this month shows the first of a new type of tin dredge that has just been completed. It will be employed on tin bearing properties in the open sea off the West Coast of Siam, where the owners, Messrs. Aokam Tin Ltd., have extensive properties.

This dredge, the *Pibul*, was originally built as an oil tanker and as this particular design lent itself to the layout of a grab tin dredge it was purchased for this purpose. The conversion work, which consisted of the removal of some 450 tons of machinery and steelwork from the original hull, was carried out under the supervision of the consultants, Messrs. Priestman Brothers Limited, working in co-operation with the Chief Engineer to Aokam Tin Ltd., and the work was carried out while the vessel lay on moorings in the Prai River, near Butterworth, Province Wellesley, Malaya.

The original diesel-driven twin-screw machinery was removed and in its place were fitted three diesel-driven alternators to provide power throughout the vessel for all purposes. In the same compartment

The picture below shows the "*Pibul*", built as an oil tanker and now a dredge lifting tin-bearing material from the sea bottom off the coast of Siam. A picture of one of the dredges is seen on the right. Our illustrations are reproduced by courtesy of Priestman Bros. Ltd., Hull.

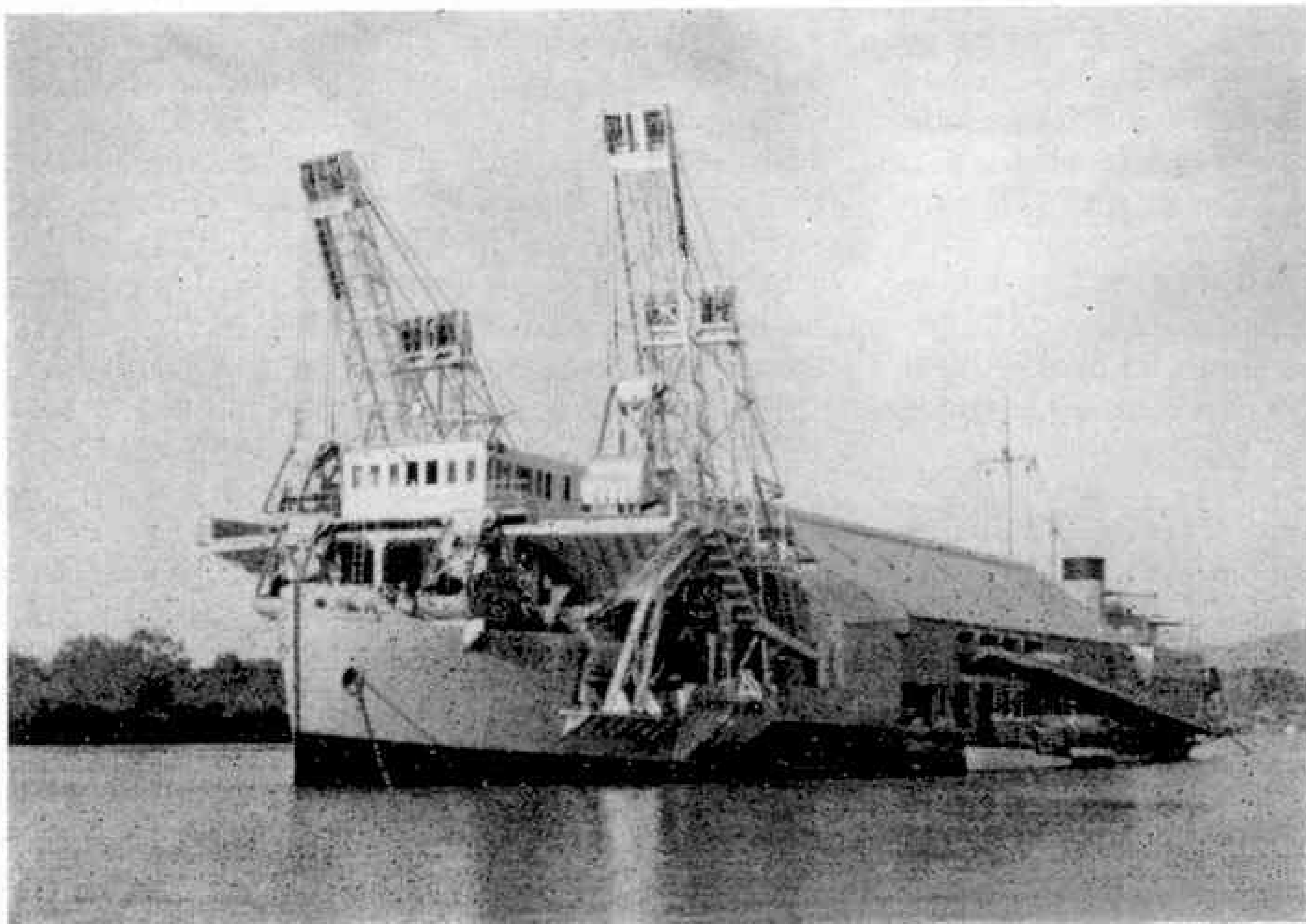


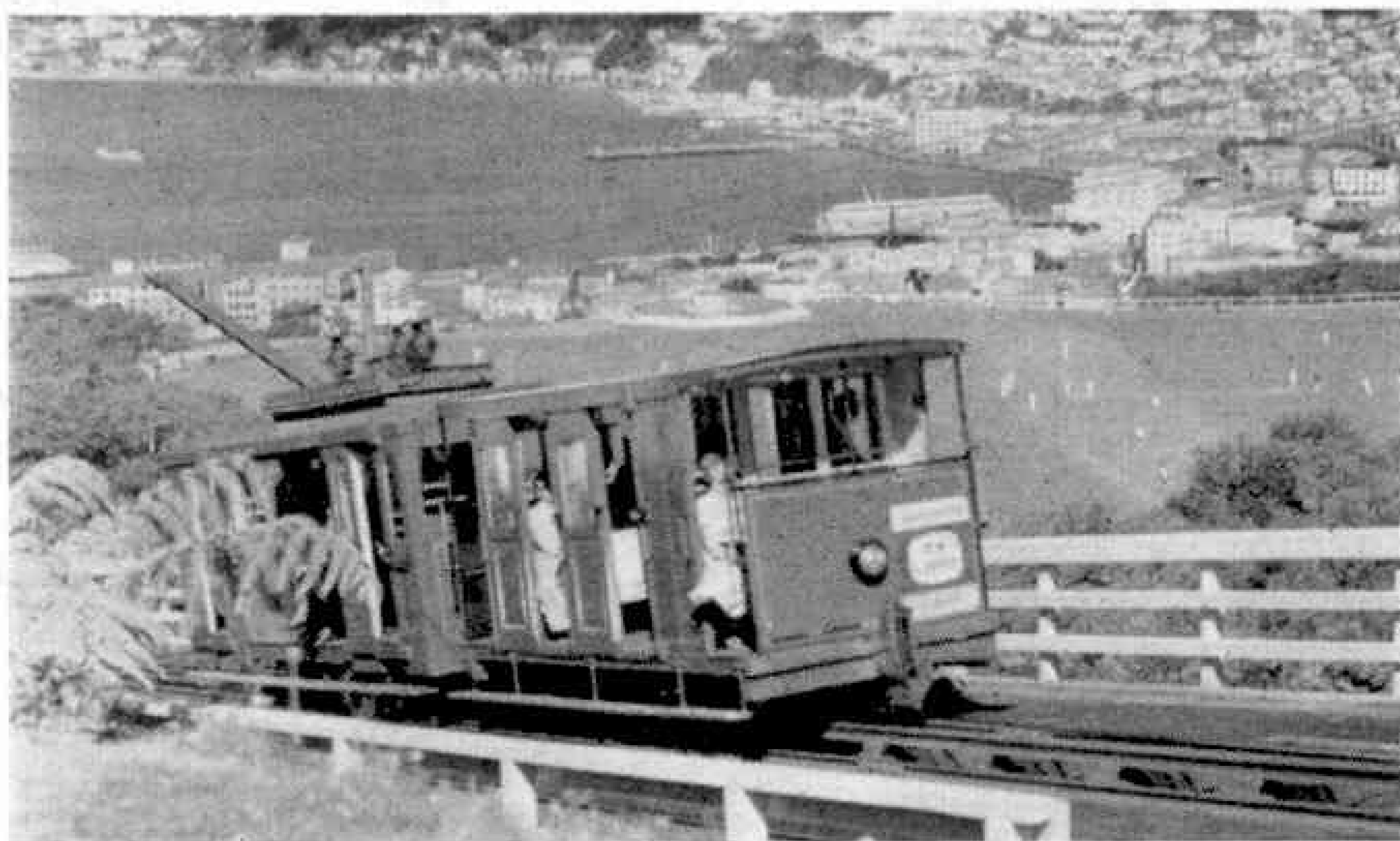
twin-screw A.C. electric propulsion motors are fitted, together with the associated distribution boards, control gear, resistance units and other auxiliary equipment.

The two Priestman 4 yd. Deep Grabbers were fitted forward on a specially constructed false deck structure that overhung the sides of the vessel, as shown in the lower illustration on this page. These two dredging units, which are of the level luffing type, each handle a 4 cu. yd. Priestman Heavyweight Grab of the four-rope type at depths down to 220 ft. below water level. The total load of grab and contents is 15 tons and the hoisting speed is 400 ft. per minute. The maximum

outrreach is 40 ft. and the minimum for discharging purposes is 20 ft.

The operators of the two units are stationed in the pilot house, one at each side of the vessel, and through the side windows they have a full view of their work and are able to control the units with full efficiency. At 100 ft. depth below water level it is anticipated that the output will be about 200 cu. yds. an hour.





Beyond and below the ascending car seen in this picture of the cable railway at Wellington, New Zealand, is the city's famous harbour, Port Nicholson.

The Wellington Cable Car

By D. Greig

WELLINGTON, New Zealand's capital city, has some old methods of transport as well as new ones. It is indeed the only city in New Zealand with tram cars *and* a cable car.

In other places in the country that have had trams and cable cars, these have now been replaced by buses. The Wellington tramcars too will probably disappear soon—they are now being removed in favour of buses—but the cable car will definitely be here for some time. It runs up from one of the city's main streets, Lambton Quay, to the suburb of Kelburn. The gradient of the line is 1 in 5.06, and its length 2,574 ft.

The cable car line was opened on 22nd February 1902. There are two units, together with an emergency unit, each consisting of two cars, one connected to the driving cable and the other to a trailer. The trailer cars were formerly in service as horse-drawn trams.

It is important to ensure that the cars do not get overloaded, as this is not good for the motor. Plans are being drawn for new, lighter cars, which will enable more passengers to be carried on each trip. The present cars can

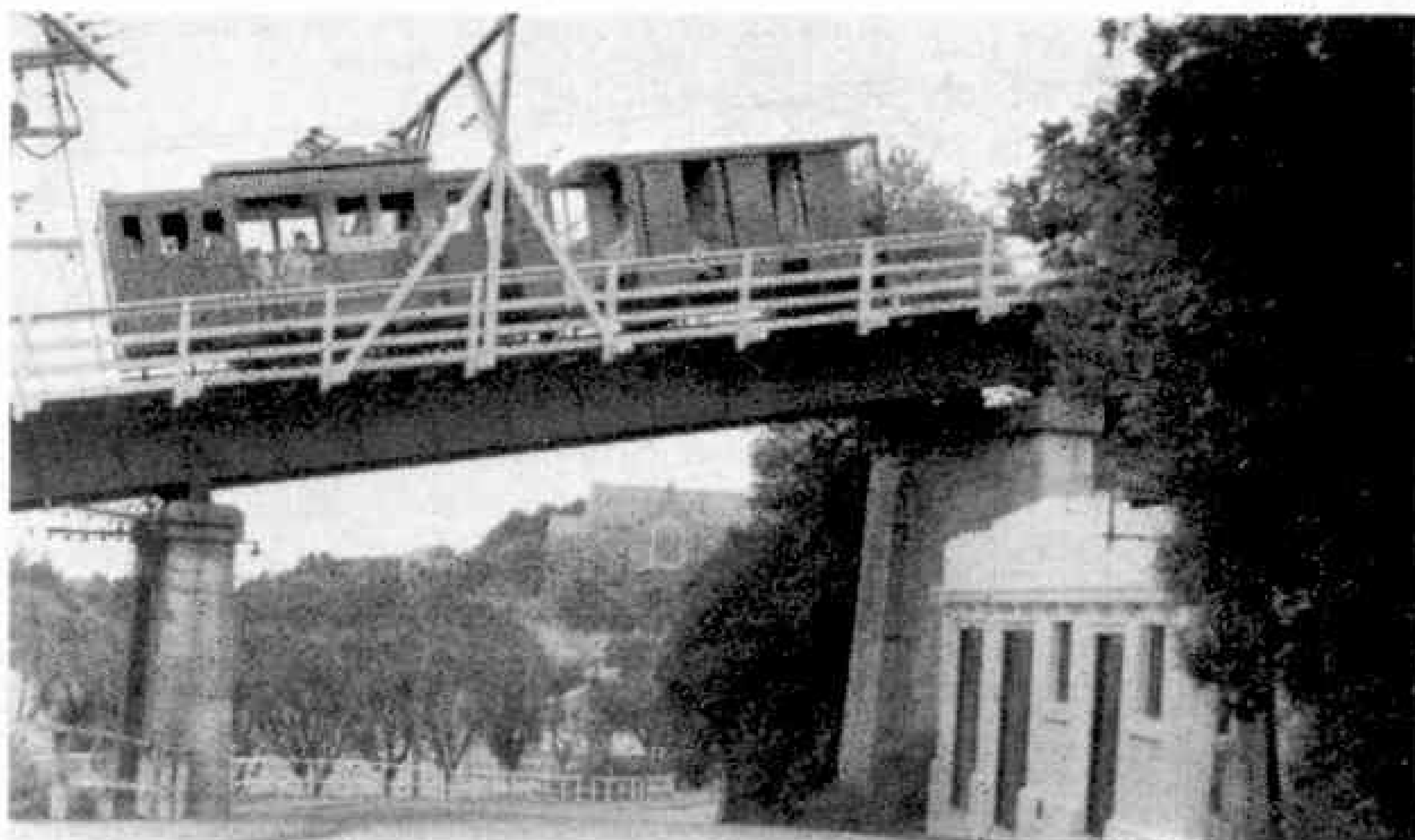
carry a maximum of 85 people.

The main cable, $2\frac{1}{2}$ miles long, stretches from the motor that drives it down one of the two lines, and then back up the other side, the junction being a 75 ft. splice. The other cable, $1\frac{1}{2}$ miles long, goes from one unit, via the wheelhouse, to the other. The cars are attached to both

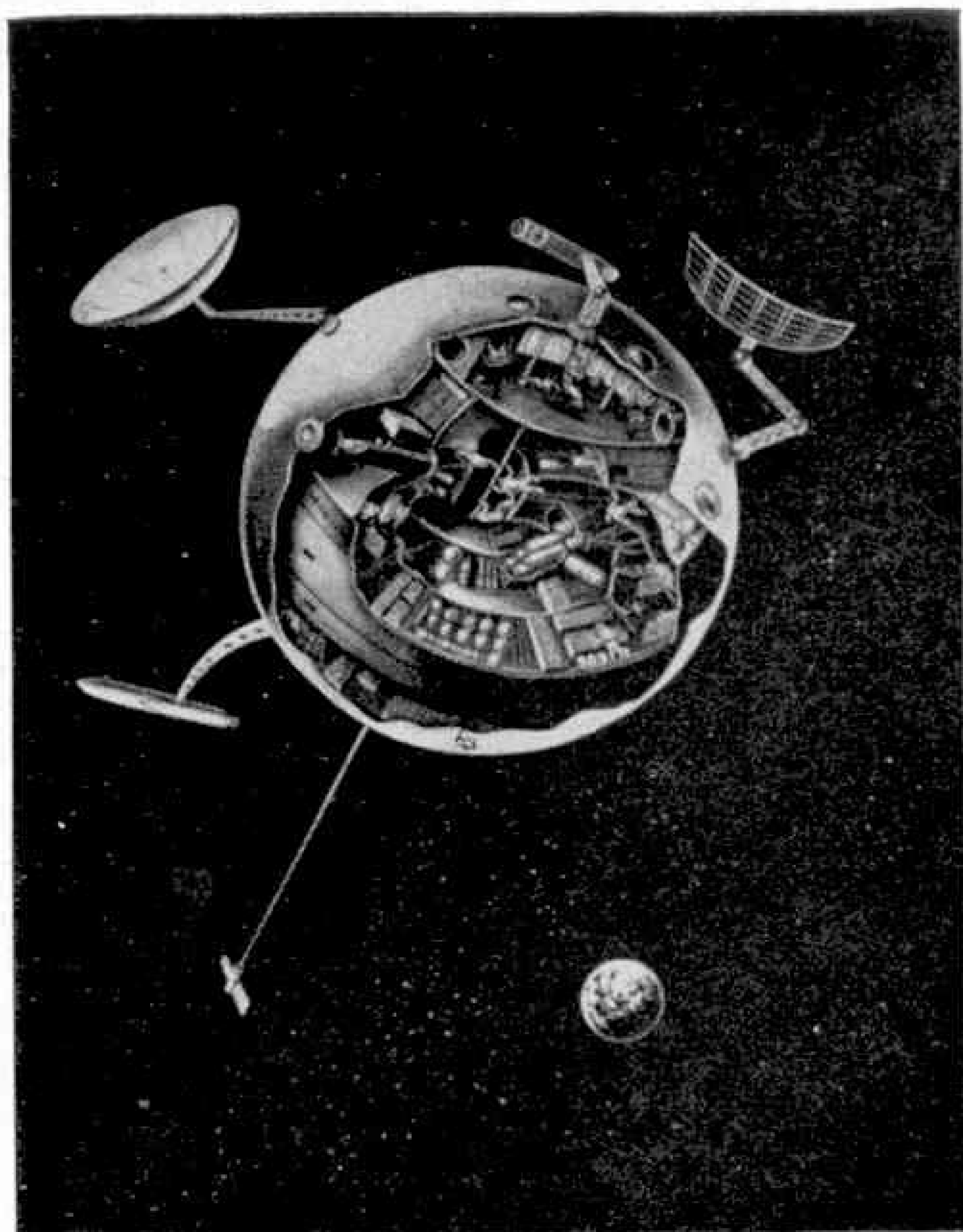
cables, but only the main cable is driven by the electric motor. Experts say that because of this arrangement the system should be described as a funicular, but everyone speaks of the cable car.

Above the cars are three overhead wires. Two of these are for controls, carrying "Stop" and "Go" messages from the "driver" to the engine, which is in the "wheelhouse", at the top of the line. The third is for the lighting of the cars. The speed of the cars is 13 m.p.h.

There are three tunnels and two viaducts on the line, from the top of which passengers can get a beautiful view of Wellington Harbour, which is known as Port Nicholson.



Another section of the 2,574 ft. Wellington cable railway, the gradient of which is about 1 in 5.



A Manned Space Laboratory Design

Scientific equipment, in particular the electronic type, can be made so small nowadays that many space scientists are of the opinion that it is a waste of effort to send men into space, for the room occupied by them would be far better devoted to automatic instruments. There is, however, still a fair body of opinion which says that man is a very versatile piece of equipment and that it would be well worth while sending him aloft for the purpose of carrying out various scientific experiments.

Many man-carrying satellite laboratories have been proposed and one of the latest is from Rocketdyne. This one weighs over 100 tons and is designed for a crew of 50. It is spherical, about 60 ft. in diameter, and could be put into a 24-hour orbit at 22,300 miles altitude, thus remaining apparently stationary to a ground observer.

Rocketdyne say that to lift this laboratory straight into such an orbit would require a thrust of 15,000,000 lb. Although the firm

The strange contrivance seen in the picture at the head of the page is a design for a space laboratory of the future, which might be used for astronomy, weather control, fusion research, space physics and television relaying. One of the instruments it carries is a reflecting telescope, through which observations of the heavens can be carried out without interference from the atmosphere. It is the work of the American company Rocketdyne, to which we are indebted for the illustrations to these Notes.

Space Notes

By

J. Humphries, B.Sc.(Eng.),
A.M.I.Mech.E., A.F.R.Ae.S.

has a contract to develop a million pound thrust motor, a cluster of 15 of these is still at least 10 years in the future. If such a project were undertaken, it would undoubtedly be launched in sections and assembled in orbit.

Snooper!

Because of the international prestige involved, it is unlikely that the first instrument-carrying rockets into space will be designed with economy in mind. So long as they reach their destination they will have done their job—politically at least. But the scientist has many questions about the solar system waiting for answers, and he wants to pack as much as possible in the way of instruments and equipment into each rocket.

The first phase rockets now being fired, such as the Russian Lunik, are based almost entirely on existing missiles; they carry very few instruments, and a power supply to last only a few days. They are designed simply to reach out to the orbits of the nearer planets, and for the amount of information obtained the cost is extremely high.

The next phase will be rockets designed either to circle the Moon, Mars or Venus, or to land on them. They will contain more instruments and the transmitters will be powered by solar cells, so that information will be sent back to Earth for a considerable period of time. Phase two rockets are now under active development.

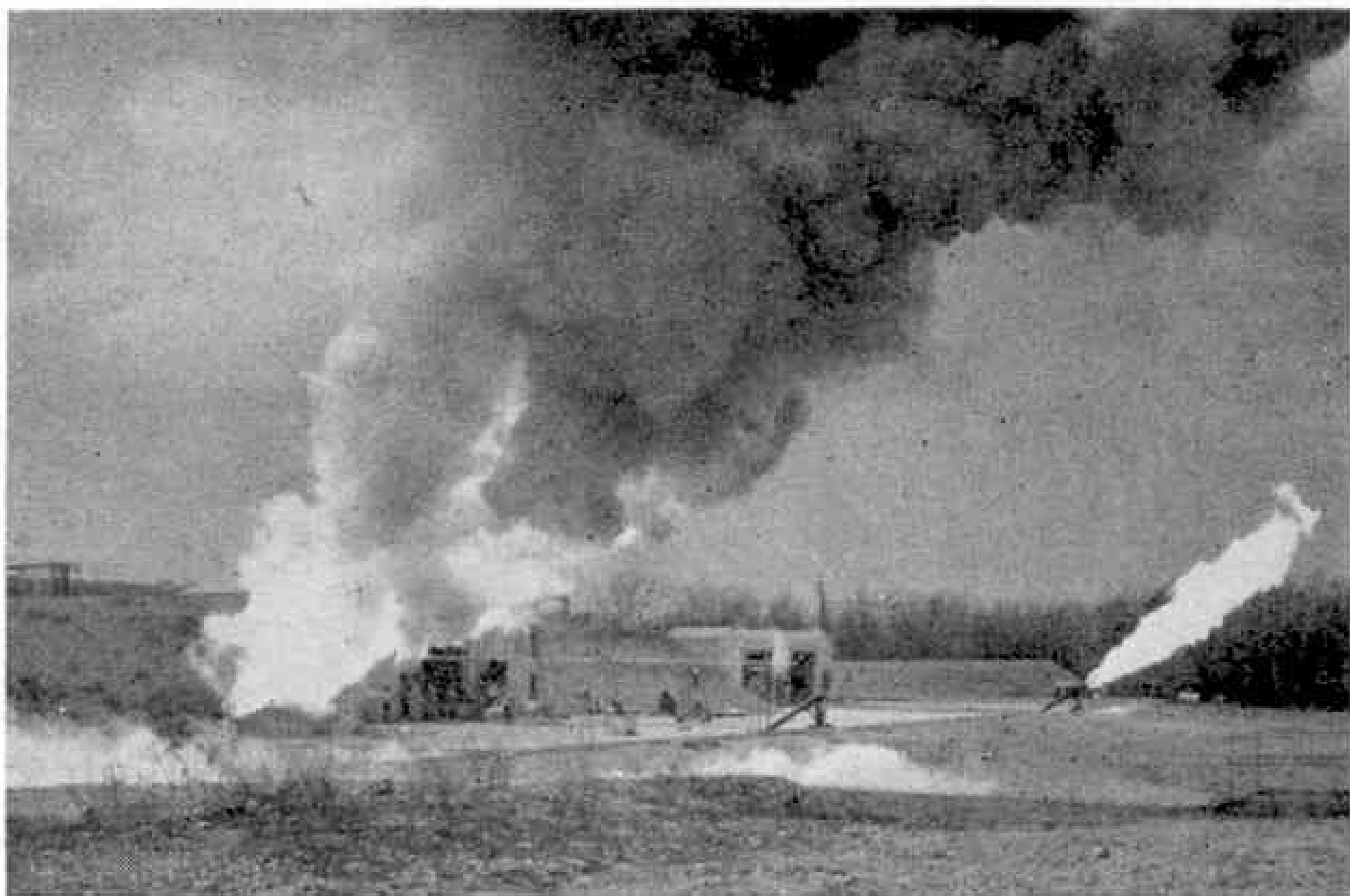
But there is a great deal to interest scientists on the further planets and in space itself. Rockets to explore these outer planets, or to cruise about the solar system at the command of a control centre

on Earth, are already being thought about in some detail. Two American workers, Willinski and Orr of Rocketdyne, have put forward plans for an ion-powered survey rocket called *Snooper*. This weighs 3,300 lb., and would be lifted into orbit by conventional chemical rockets.

This is well within the capabilities of several existing systems. The ion rocket operates only in a vacuum; it works by ionising an element such as caesium, and accelerating the ionised particles electrically to a very high speed and ejecting them to give thrust. The system uses only very minute quantities of caesium, but must be supplied with electrical power. This electricity is produced from a nuclear reactor and turbogenerator.

Unfortunately such a system is inherently inefficient and the only way to get rid of the waste heat in space is to radiate it. Hence the "wings" seen in the picture of *Snooper*. These wings are just large radiating surfaces consisting of very thin-walled copper tubes connected by thin sheet aluminium. The coolant passes through the copper tubes and the whole surface is blackened to reject heat efficiently.

The wings are stowed at take-off and opened out in orbit. Two motors are used, each giving a thrust of one-sixth of a



Smoke and flames spurt from exhaust stacks as a turbopump and gas generator are given simultaneous tests.

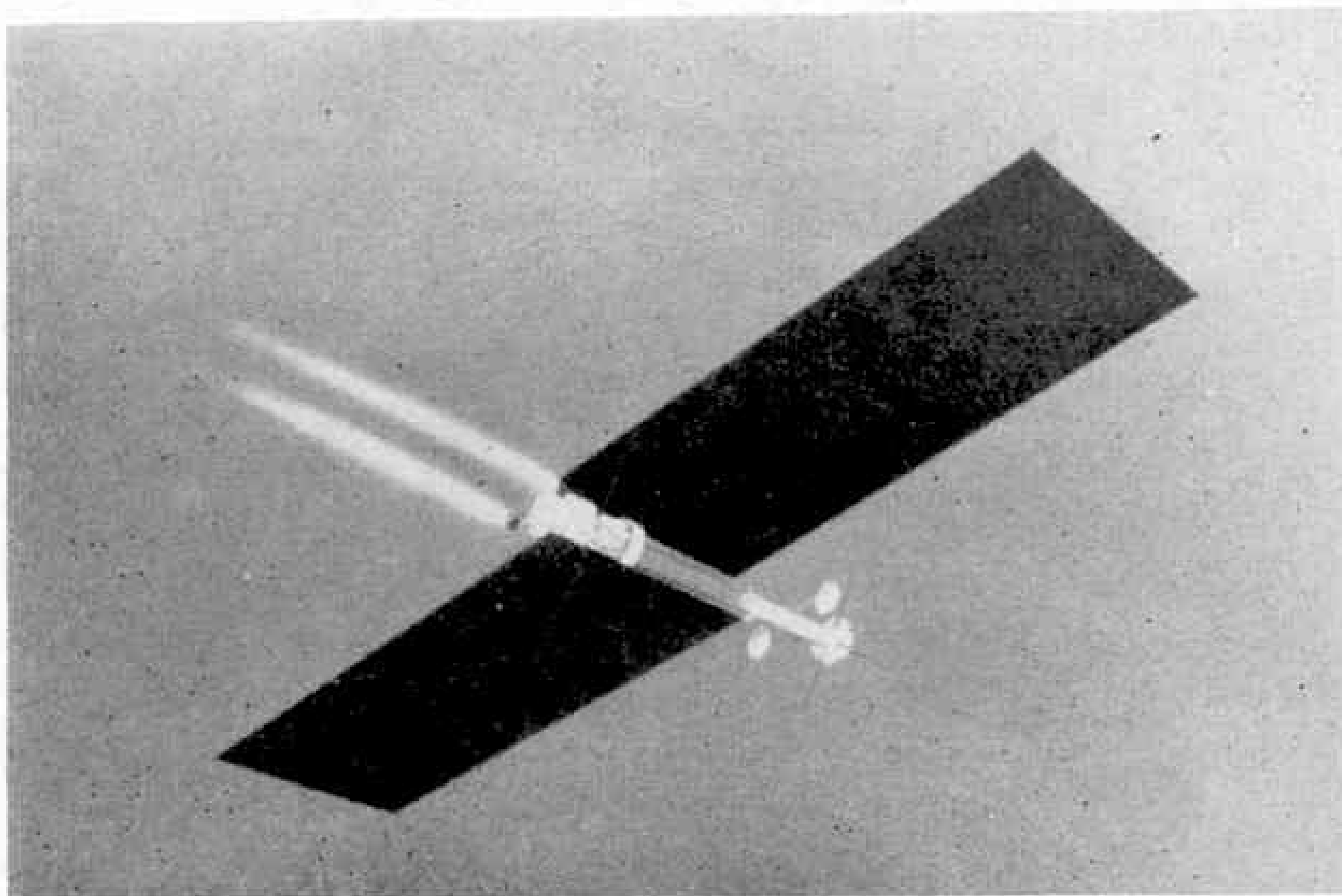
pound, which is sufficient to give *Snooper* an acceleration equal to one ten thousandth of a "g". The payload is 1,500 lb., and the power source is sufficient to power the rocket for a year.

Gas Generators

Feeding the propellents into the combustion chamber of a large modern rocket is a major problem; for example, each of the three chambers of Atlas consumes 70 gallons of propellant per second. The only practical method of transferring this quantity is by pumping. This means high-speed centrifugal pumps driven by a turbine and a source of steam or gas to drive the turbine.

The "boiler" or gas generator must be small, simple and light, in keeping with the rest of the rocket. Rockets using hydrogen peroxide as the oxidant start off at an advantage, since the peroxide can be split up into a mixture of high-temperature steam and oxygen by passing it over certain catalysts.

Modern rockets produce turbine gases by burning the main propellents in a small gas generator. This uses only from 1 to 2 per cent of the propellant of the rocket, but produces an awe-inspiring flame, as can be seen in the upper illustration on this page.



This is another Rocketdyne design, this time a space-exploring robot rocket uses a nuclear reactor to supply its energy. It is called the Snooper.

Air News

By

John W. R. Taylor

Mach 2 Mirage

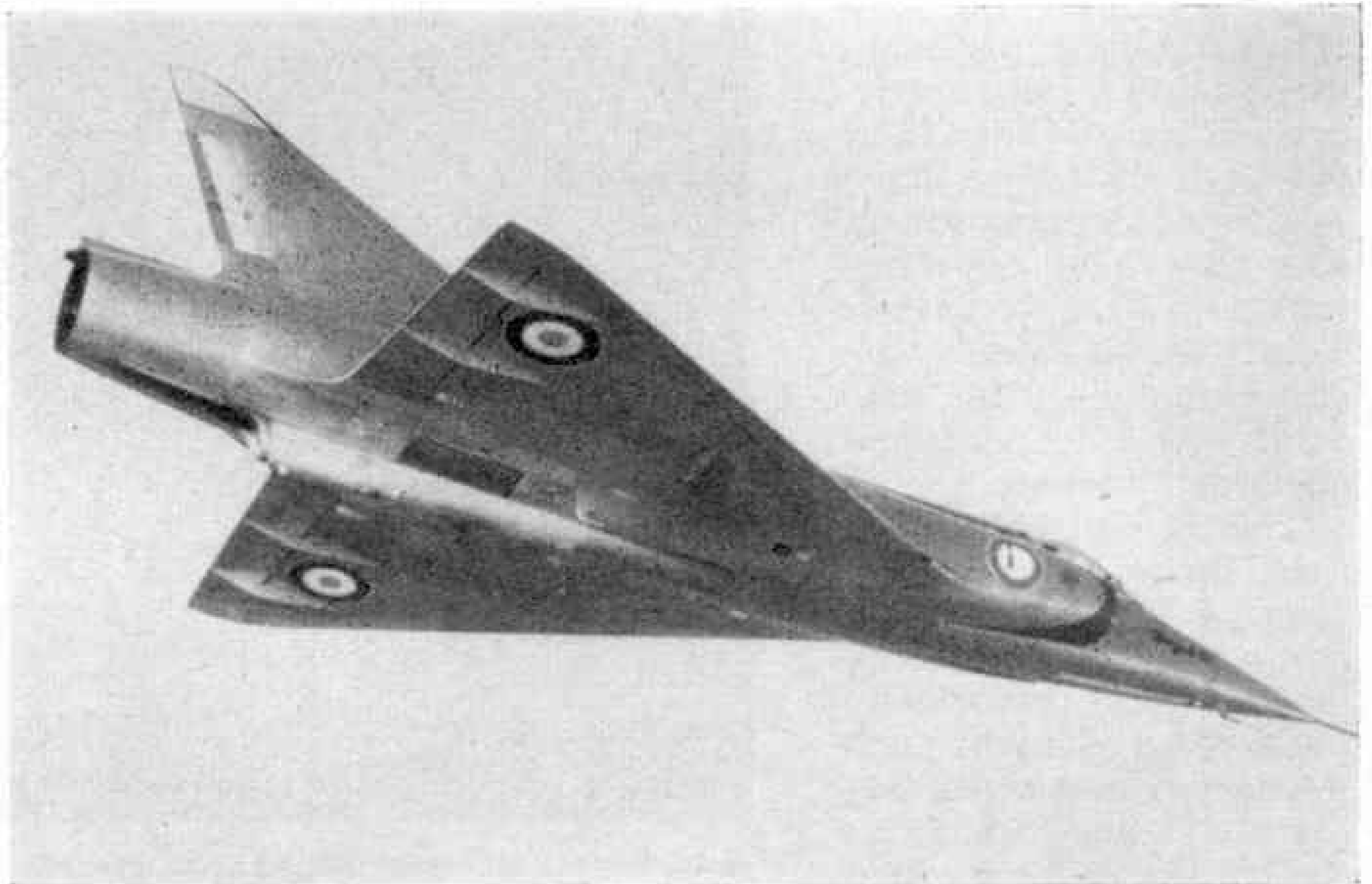
One of the latest superb modern military machines produced by the French aircraft industry is the Dassault Mirage III-A single-seat fighter, illustrated above. In size and general layout it is very like the Fairey Delta 2 research aircraft which set up the first over-1,000 m.p.h. speed record in 1956; but it is far more powerful and even faster.

This particular picture is the first to show clearly the under-fuselage 3,700 lb. thrust SEPR 841 rocket-motor which supplements the 13,228 lb. SNECMA Atar 9 turbojet and afterburner in the Mirage's fuselage. Even without the rocket, the little fighter has been flown regularly at twice the speed of sound (1,320 m.p.h.) during high altitude test flights. Carrying a Nord 5103 air-to-air missile under its fuselage, it has climbed to more than 60,000 ft. at a speed of 1,100 m.p.h.

The production version will be designated Mirage III-C and 100 have already been ordered for the French Air Force. They will be generally similar to the III-A, with the same engines, and will carry an armament of two 30 mm. cannon and 38 small air-to-air rockets or a guided missile. With a span of 27 ft., length of 45 ft. 5 in., and loaded weight of 17,590 lb., they will be able to fly at 1,430 m.p.h., and will have a range of about 310 miles.

New Naval Fighter

Another fighter in the news is the two-seat McDonnell F4H-1, illustrated below, which has been chosen as the U.S. Navy's next all-weather interceptor in preference to the single-seat Chance Vought F8U-3



One of the latest French military aircraft, the Dassault Mirage III-A single-seat fighter. The production version will be designated Mirage III-C, and 100 of these have been ordered for the French Air Force.

Crusader III. It is a massive aircraft, with a span of 38 ft. 5 in., length of 56 ft. and weight of at least 40,000 lb.; but a smaller aircraft could not have offered such an excellent all-round performance.

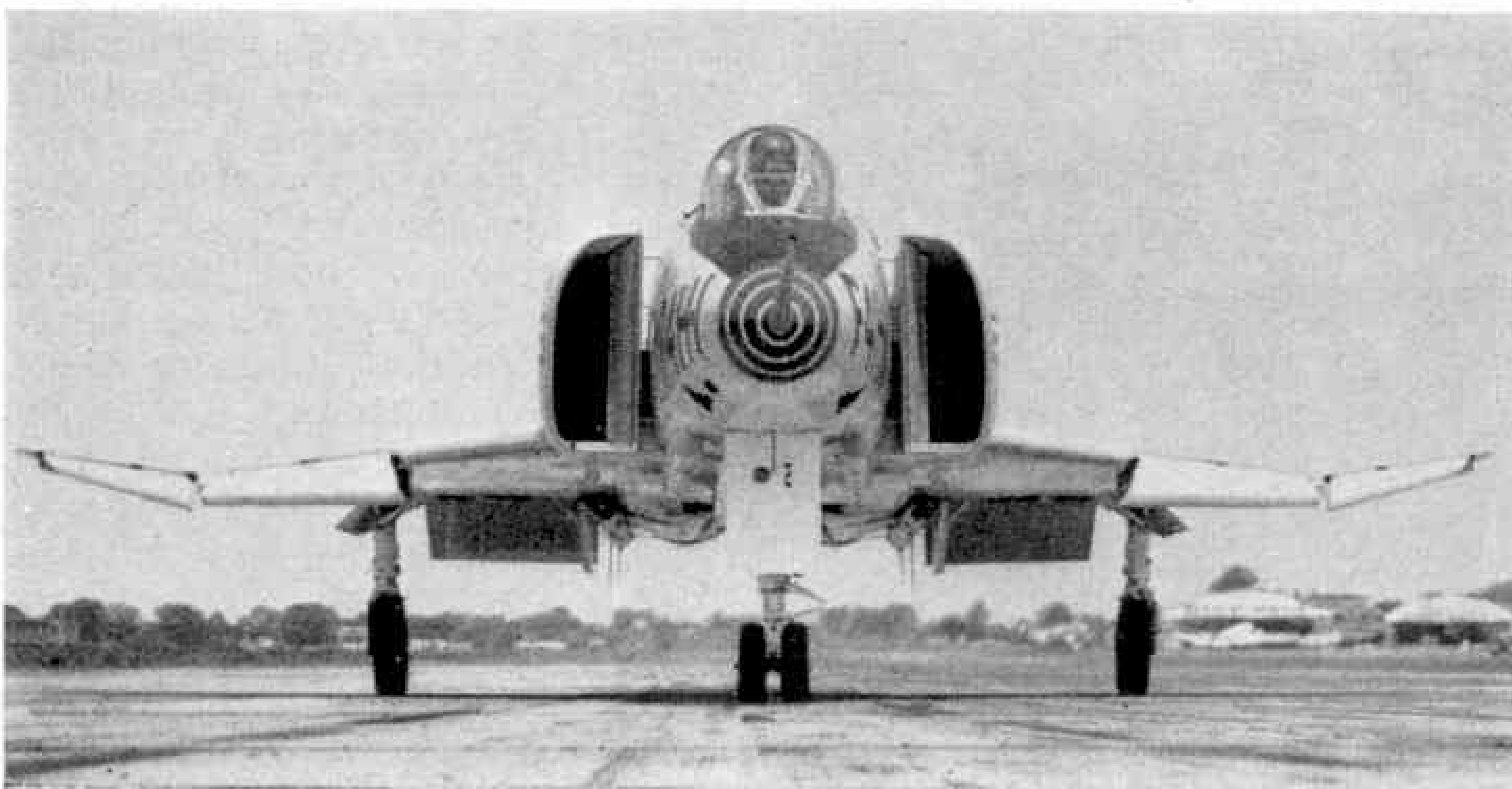
In addition to packing two 11,000 lb. thrust General Electric J79 turbojets inside its fuselage, the F4H-1 carries an enormous quantity of fuel, sufficient for a range of 1,500 miles without external tanks. This helped to win it the U.S. Navy contract, as did the presence of a second crew-member to watch over the fire-control radar which tracks down the fighter's target and launches automatically its armament of four Sparrow III missiles. As can be seen, the missiles are carried semi-enclosed in the bottom of the fuselage and wings. Also unusual are the sharply-up-swept wing-tips and the down-swept tailplane, but we must be prepared for unfamiliar design features in aircraft intended to fight at speeds up to 1,450 m.p.h.

Far Flying Viscount

We tend to think of the turboprop Viscount as being a short-range air liner, because B.E.A. have few long-distance routes on which to use it. So it came as a surprise to learn early in June this year that a Viscount 700 had flown 4,684 miles non-stop from Gander,

Newfoundland, to Santa Maria in the Azores in 5 hr. 10 min., at an average speed of nearly 330 m.p.h. What is more, it landed with a fuel reserve of 600 gall.—sufficient to take it a further 700 miles to Lisbon if its crew had wanted to do so.

The Viscount, which carried two



The McDonnell F4H-1 fighter, an all-weather interceptor, is to go into service with the U.S. Navy.



One of the Boeing YL-15 two-seat artillery observation aircraft, of 1949, referred to on this page.

spare Rolls-Royce Dart engines and a quantity of other equipment as freight, was on its way to the Middle East, where it has entered service with Kuwait Airways. It was operated formerly by British West Indian Airways.

Baby Boeing

The American Boeing company is usually associated with very large bombers and air liners. However, back in 1949 it built ten small two-seat artillery observation monoplanes known as YL-15 Scouts which were always particular favourites of mine; so it was a pleasant surprise to receive recently the photograph reproduced above, and to learn that at least one is still flying.

As can be seen the YL-15 has a most unusual shape, the object of which was to give its crew the finest possible view downward and around them. They sat back-to-back, completely surrounded by perspex windows, in a cabin slung under the high unbraced wing. Even the upside-down tail was carried on a boom mounted well out of the way above the cabin.

Powered by a 125 h.p. Lycoming engine, the YL-15 had a top speed of 112 m.p.h. Huge combined flaps and ailerons on the trailing-edge of its 40 ft. wings enabled it to fly at under 40 m.p.h. without losing height, and when the U.S. Army decided it didn't want the ten production aircraft, some of them were handed over to the Fish and Wildlife Service for anti-poacher patrol and other duties. One is now being used apparently by Space Electronics Corp., of Glendale, California, and I feel sure you will agree that it looks very smart.

No More Sweet Take-Offs

Another relic of the old and less-comfortable days of flying has disappeared with the news that B.E.A. will no longer offer sweets to passengers before take-off. By sucking a barley sugar, it was possible to prevent one's ears from "popping" in the varying pressures as an air liner climbed to its cruising height; but earache caused by change of altitude is extremely rare in these days of pressurised cabins. By cutting out the sweets B.E.A. will

save thousands of pounds now that they carry nearly three million passengers a year.

Air-Launched Ballistic Missiles

After a design competition in which 14 U.S. companies took part, Douglas have been awarded a contract to develop a ballistic missile suitable for launching from a carrier aircraft at least 1,000 miles from its target.

By utilising such a weapon, the U.S.A.F. will be able to avoid the use of easily-located launching-sites on the ground; yet there will be no need for the piloted carrier-plane to venture within range of the enemy's short-range fighter and missile defences.

A bomber to carry the air-launched missile is already being built by North American. Named the B-70 Valkyrie, it will be an immense tail-first delta-wing aircraft, powered by six J93 turbojets which will enable it to cruise at 2,000 m.p.h. at heights above 70,000 ft. The missile is known at present only by its Weapon System designation of WS-138A. It is expected to be a solid-propellant rocket, about half the size of the submarine-launched Polaris.

Germany's First Post-War Helicopter

Prof. E. H. Focke, whose pre-war Fw 61 was the world's first fully-controllable helicopter, is the designer of the Borgward Kolibri, first all-German helicopter to fly since World War II. As can be seen in the bottom picture on this page, it has a fairly straightforward layout, except for the twin tail-rotors which are mounted at 90 deg. to each other. It is a three-seater, powered by a 260 h.p. Lycoming engine which drives a 29 ft. 7 in. three-blade main rotor. At an all-up weight of 2,440 lb., the Kolibri cruises at 87 m.p.h.

Unwelcome Tenants

B.E.A.'s Notice to Flying Staff No. 231 tells of two occasions when Pionair aircraft failed to reach take-off speed because of birds' nests which had been built in the engine carburettor air intakes. Special care is being taken to see that the birds choose their homes more carefully in future.

The three-seat Borgward Kolibri, Germany's first post-war helicopter.



Lost Railway!

Memories of the Midland and Great Northern Joint

By R. S. McNaught

FOR many years from 1893, one way of reaching the East Coast and Norwich from the Midlands and the north was by way of the Midland and Great Northern Joint Railway. I have to say "was" because this line was largely closed down at midnight on the last day of February of the present year, and some sections of its track have already been taken up.

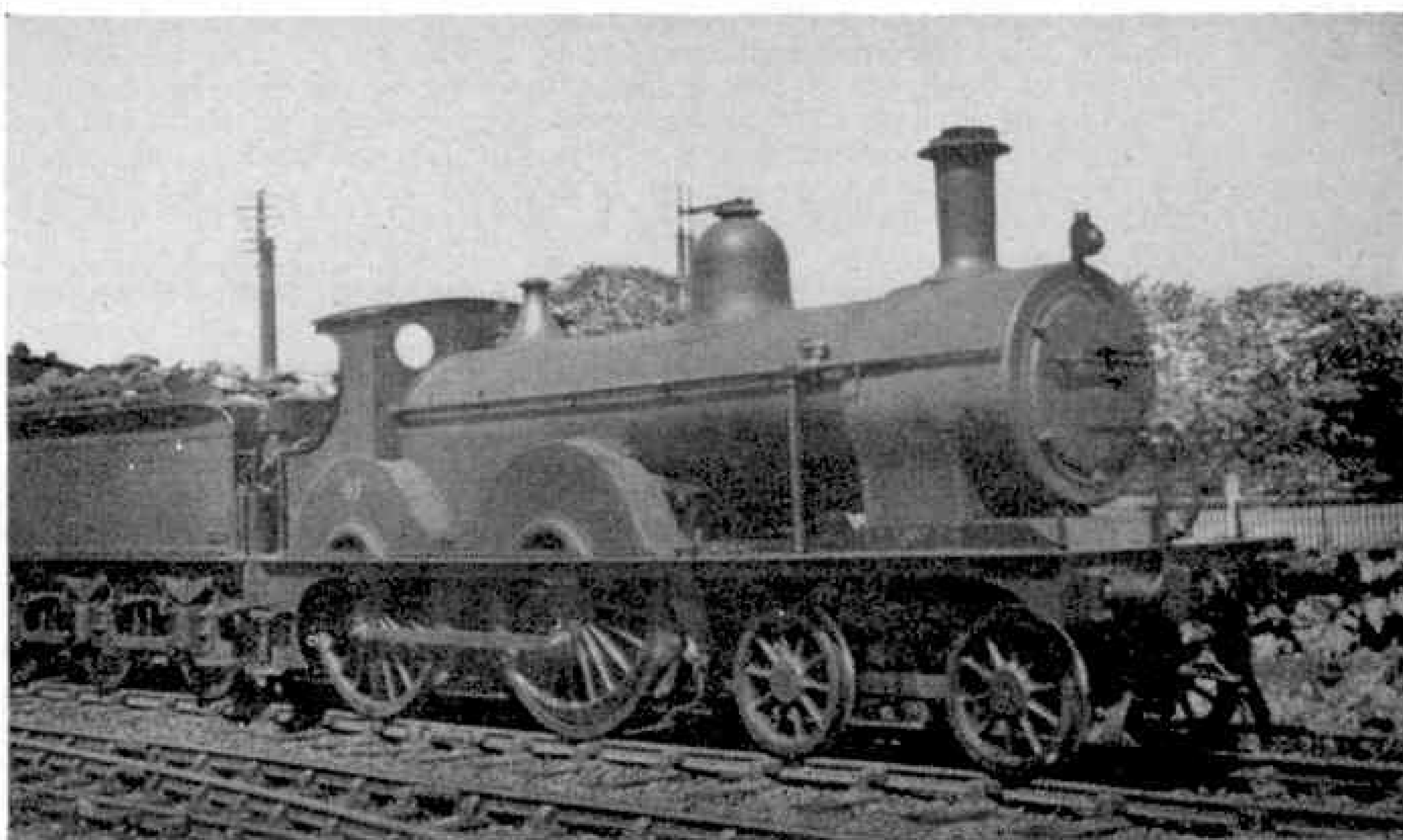
Over that period of nearly 70 years you could purchase a ticket at Liverpool, Manchester, or Birmingham, and several other big centres and ride across England in a comfortable 'Through Carriage'—excitingly roof-boarded *Cromer*, *Norwich*, *Yarmouth* (*Beach*) or *Lowestoft*. Even from London you could travel in a Great Northern coach marked *Cromer* from King's Cross, while from the other towns you would be seated in one liveried in either Midland, Great Central, or even London and North Western colours. In each case there was a dining

or buffet car to help shorten a journey, which could be long and tedious, but was full of pleasure and interest if you appreciated the working of a most efficient and very English rural railway at its best!

The main points where the Joint line linked up with the trunk systems were well inland from the East Coast. They were Peterborough, for King's Cross, Leicester (London Road) for the Midland, and Nottingham (Midland) for both Midland and L.N.W.R. traffic. Other services from the north via Lincoln were taken over at Spalding, and some 20 miles farther east was an inter-change point with the old Great Eastern system at King's Lynn.

The M. & G.N. had a fleet of its own engines, of which it was justly proud, and these came to meet your "Through Coaches" well off their own metals. And they generally refrained from adding to the train any of their own small 4 or 6-wheel carriages, of which the Joint was not so proud; these were kept for its own local workings and were little jolters, mostly of Great Northern design, well-kept and tastefully embellished. The oldest had BLUE lining on varnished teak.

As befitted Puritan East Anglia, the



Midland and Great Northern Joint Railway 4-4-0 locomotive No. 47. The photograph, by J. P. Wilson, was taken in July 1934, when the engine was painted dark brown, unlined.

compartments had plain white partitions without the pictures so universal over the years, and their steam-heating apparatus was notorious for its angry hissing. Not until the period between the World Wars did the company own bogie-fitted carriage stock, and then they acquired an assorted lot from the Midland, Great Eastern, North Eastern, and L.N.W. stables and ruined their outward good looks with a coat of vile light brown paint.

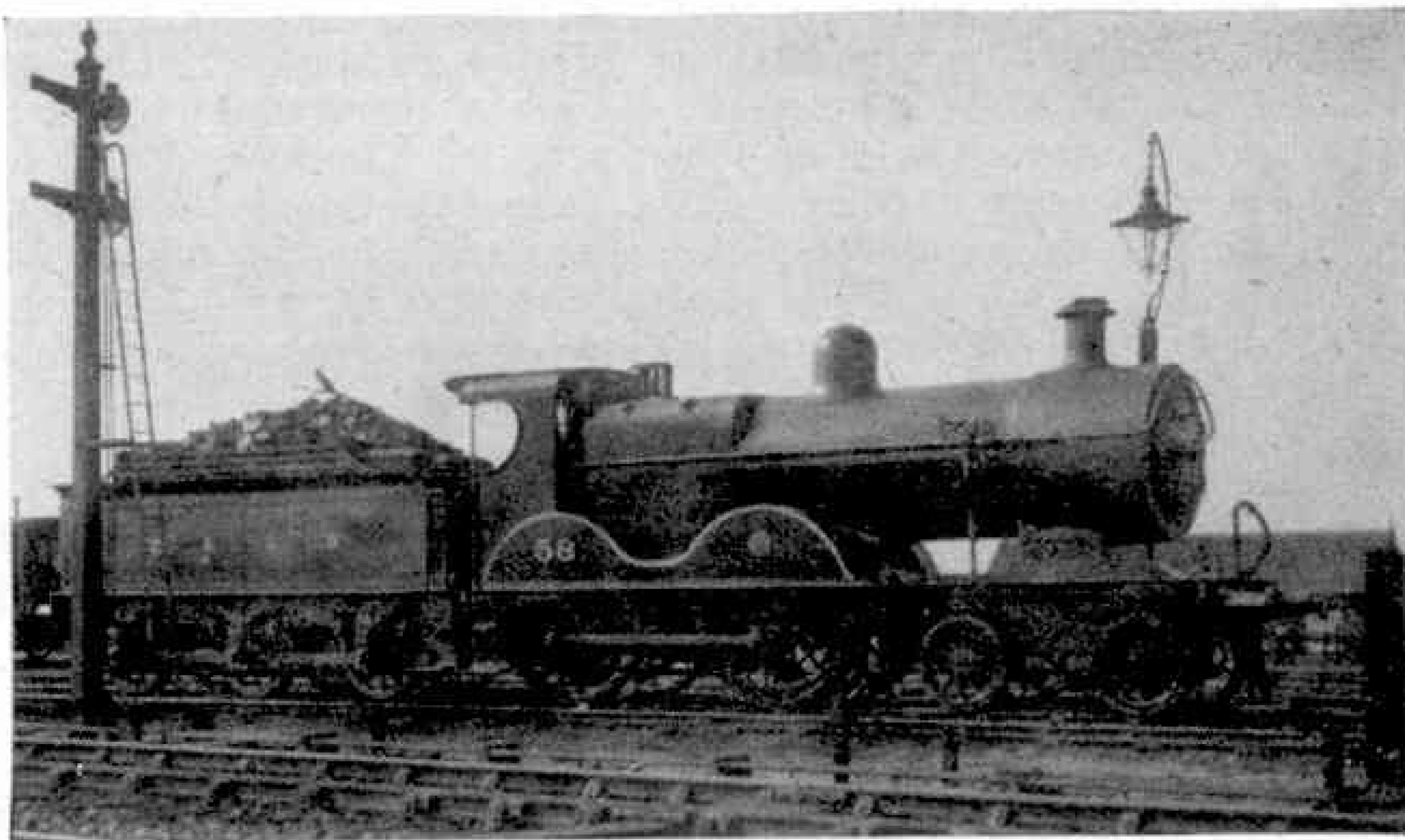
But the engines in their heyday were a different matter. Modest in size, they had a livery of "French Mustard" yellow, with artistic lining, almost exactly like the Stroudley colour scheme of the Brighton

Railway. On a rural system that owned only one tiny tunnel of 330 yards, at Bourne, and served no industrial areas, there was every incentive to clean engines so gaily decked.

Pride in the job was something to be expected when you noticed that the drivers had their names above the regulator on their footplates. The passenger stud practically throughout the Joint's history comprised 40 4-4-0's of S. W. Johnson's classic Midland design, with Salter valves mounted upon their domes and elegant brass "trumpets" enclosing a second safety valve of the lock-up type on the fire-box. Such engines simply asked for the same loving care that their larger-wheeled sisters always had on the Midland.

The merits of the Derby-type "C Class" did not begin and end with their good looks and high maintenance. The example that took over a train for Yarmouth from the M.R. at Leicester, for instance, would have been a Yarmouth engine that had already worked over the 144½ miles with the up train, with a brief "turn-round" of under 90 minutes for servicing and re-fuelling before returning to the coast. And this

with a not inconsiderable load over a pretty tough line, to complete another day in a spell that could well have lasted into months. From 1909 onward ten of the class, which were all originally built by private firms between 1894 and 1899, were rebuilt with much larger Midland-style



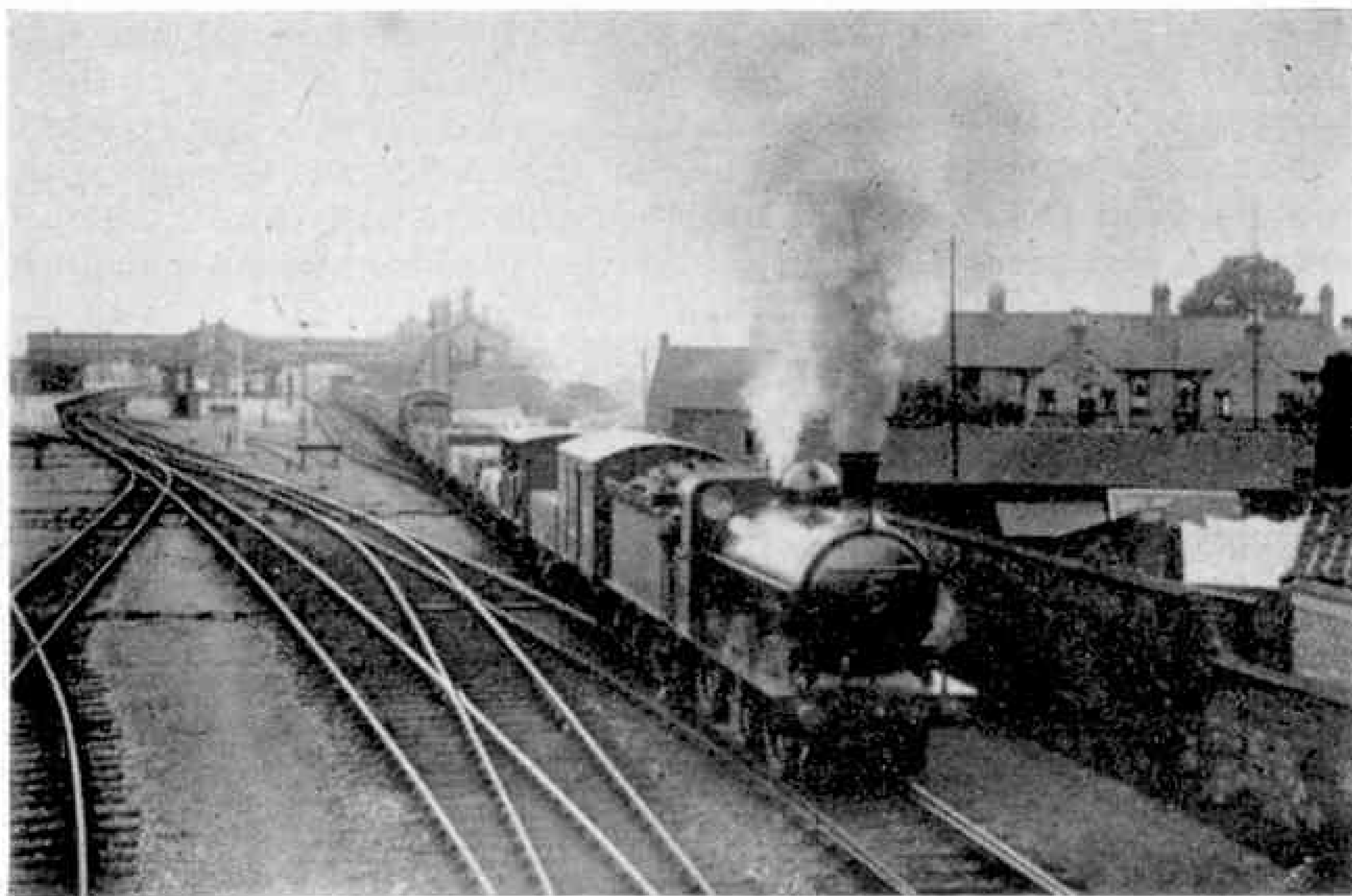
A large-boilered rebuild of the Johnson standard 4-4-0 class. Photograph by W. H. Whitworth.

boilers, but were never superheated. The rebuilds became the recognised express top link.

Another batch of successful and well-loved 4-4-0's dated back to 1881-8. Although built by Beyer, Peacock & Co. for the Eastern and Midlands Railway, which was an original constituent of the Joint, they were almost identical with a contemporary class built for the old London and South Western Railway to the

drawings of William Adams. These "Peacocks" were of outside-cylinder type. They steamed well and would coast for miles with closed throttle. Through rebuilding they also became rather Midlandised in outline.

No Joint engine was too proud to help with goods traffic, which was probably the main source of revenue, thanks to the great Norfolk and Lincolnshire harvests of fruit and vegetables. All the same, there were some standard freight



No. 84 Ivatt 0-6-0, on a special goods train for Sutton Bridge, is seen here leaving Spalding. Photograph by A. W. Croughton.

locomotives, 16 of Midland style and, most aptly, 12 also of H. A. Ivatt's standard Great Northern design. These latter were intended for the parent system, but were diverted to the Joint straight from their builders, Dubs and Co., in 1900.

There were a few assorted tank engines, ranging from three shapely 4-4-2's that were the only engines ever built at the Joint's modest little works, at Melton Constable, to some shunters of great antiquarian interest. More than once it was found necessary to borrow a few engines from the parent companies, and three of the well-known Midland 0-4-4 tanks were kept for about ten years.

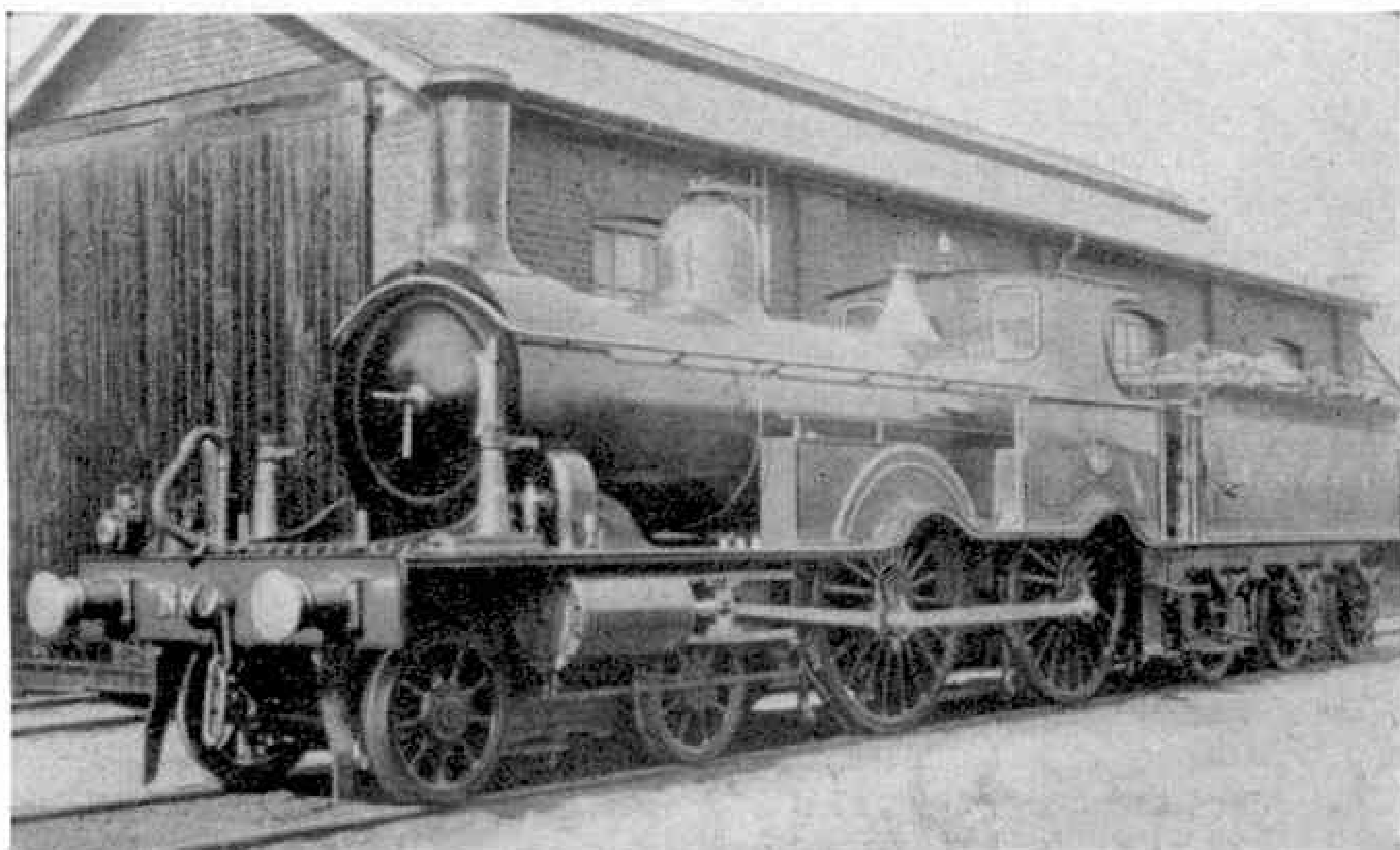
Our Yarmouth-bound carriage from Leicester, now behind its dainty yellow Joint engine, attained M. & G.N. metals at the end-on junction at Little Bytham soon after pausing at Saxby, 18½ miles from the start. One's immediate impression was of the amount of single-line track and this, in conjunction with short rails, always made speed seem higher than it actually was. Also, it was pleasant to note the characteristic Great Northern style of "Somersault" signals, and that even on the one-line sections the track was well laid out for fast running.

The automatic tablet-exchange apparatus fitted on the side panels of the tender was the Whitaker pattern, as also used on the Somerset and Dorset Joint line, which indeed had much in common with the M. & G.N. Prior to 1907, tablets had been exchanged by hand, which was a risky and unreliable custom at anything like speed.

Other features that would have been noted were the extreme trimness of the stations and signal-boxes, the preponderance of level crossings over bridges, and the extensive use of concrete for mileposts, etc., for this line was nothing if not economical. It even transported fresh water to its crossing keepers and signal boxes out in the wilds by goods train and in ancient 4-wheel tenders the little mid-Victorian engines of which had

vanished perhaps sixty years before!

You could not travel far without noticing the friendliness and spirit of "camaraderie" among M. & G.N. men. This was shown, in particular, among the enginemen, and was in part inspired by their Locomotive Superintendent, who visited every shed on the system and rightly claimed that he knew the good and bad in every individual engine. He always expected to see his personal favourites groomed to perfection and being given the "best jobs"! Melton Constable, described as a miniature Crewe in the middle of Norfolk, was the hub of



No. 25, one of the 4-4-0s built from 1881 to 1888 by Beyer, Peacock and Co. for a line that became part of the Midland and Great Northern Joint Railway when it was formed in 1893. Photograph by R. S. McNaught.

the system, and the two "D's"—Derby and Doncaster—were exotic names in comparison.

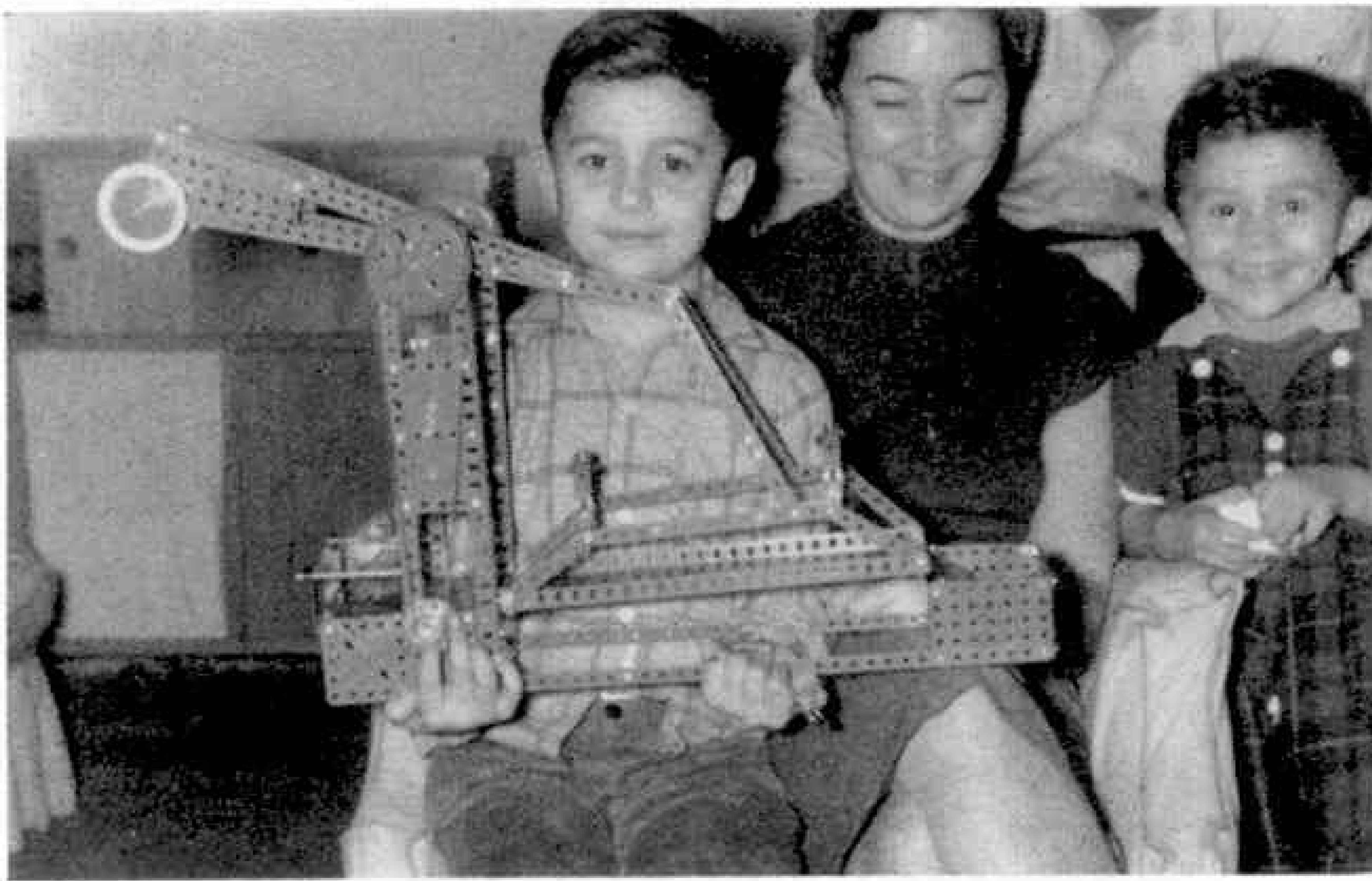
As befitted such an agricultural line, the Joint Traffic officials, from country stationmasters upward, kept a hopeful and expert eye on the progress of the crops. After touring the parish and yarning with farmers, they could make a provisional estimate of the requirements of wagons, vans, sheet-covers and boxes for their station, and to many of them the weekly procession of long, often double-headed, excursion and relief trains in the summer was a worrying diversion from the REAL work.

The decline of the railway set in gradually after World War I, when lorries and road coaches began to compete for freight and passenger traffic. The engine stock began to feel its age, and the gay livery gave place to a dull but quite pleasing all-over brown, ending at last, needless to say, with plain black.

(Continued on page 420)

MECCANO MAGAZINE

Junior Section



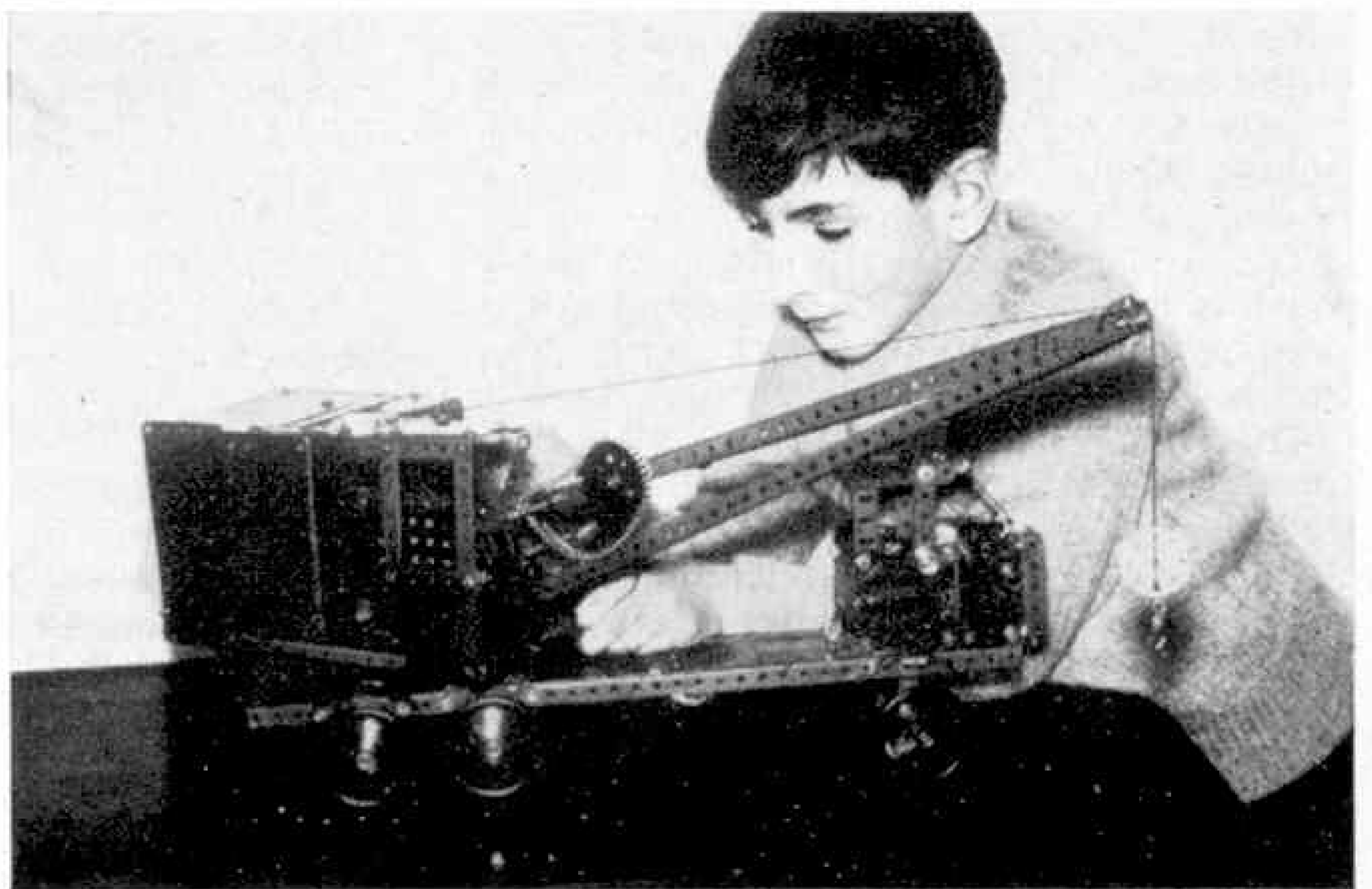
HERE are pictures of two of my friends who have started well on their careers in Meccano and, needless to say, both of them look remarkably happy! I have chosen the pictures of these youthful enthusiasts because the boys are of about the same age and, as far as I can judge from the models they are dealing with, they have also reached somewhat the same stage in constructional ability.

Let us look at the upper picture first. The boy proudly displaying his Meccanolifting bridge, which many of you will recognise as one of the models in the No. 6 Manual, is Coral Embil, who lives in Turkey, in Istanbul, the capital of that country, to be precise. His father often makes trips to London, and never returns without taking Coral more Meccano parts that he

is in need of to continue his model-building. His delight in this pursuit is shared by his mother and his younger brother and there is no doubt that Meccano model-building plays a very important part in the home life of the Embil family.

Michael Holmes is the model-builder seen in my second picture. His home is in Hull, which is about 1,500 miles distant from Istanbul "as the crow flies". The mobile crane that he is operating is a model

of his own design, and from what is seen of it in the photograph, it is clear that he knows quite well what he is doing when he sets out to plan and build a model. Besides being a keen model-builder, he is a Hornby-Dublo enthusiast, and between them the two hobbies keep him thoroughly and happily occupied all the time that he has at his disposal for his hobbies.



Spanner's Special Section For Juniors

Easy Model-Building

Log Saw

For model-builders who possess an Outfit No. 1, or one larger, the power-driven Log Saw shown in Fig. 1 will prove really attractive. It is driven by a *Magic* Motor, which is bolted to the baseplate formed by a $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flanged Plate 1.

Fixed to the baseplate also are four Angle Brackets, to each of which a Fishplate is attached. One of the Fishplates is seen at 2. To the upper holes of two of these Fishplates two further Angle Brackets are bolted, one of these being seen at 3, and to them a $2\frac{1}{2}''$ Strip 4 is fixed.

To the free holes of the other two Fishplates a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip 5 is bolted. Across the front ends of the Double Angle Strip and the $2\frac{1}{2}''$ Strip a further $2\frac{1}{2}''$ Strip is bolted.

The saw is represented by a Bush Wheel 6, which is fixed on a 2" Rod mounted in the apex holes of two Trunnions 7 and 8. The Rod is fitted with a 1" Pulley with boss.

The pulley on the *Magic* Motor is connected by a Driving Band to a 1" Pulley with boss 9, which is fixed on a $3\frac{1}{2}''$ Rod 10 supported in two columns each formed by a $5\frac{1}{2}'' \times 1\frac{1}{2}''$ Flexible Plate edged by $5\frac{1}{2}''$ Strips and bolted at its lower end, together with a Flat Trunnion 11, to the Flanged Plate 1. The Columns are linked together at the top by means of a $2\frac{1}{2}'' \times \frac{1}{2}''$ Double Angle Strip. Rod 10 carries also another 1" Pulley with boss that is linked

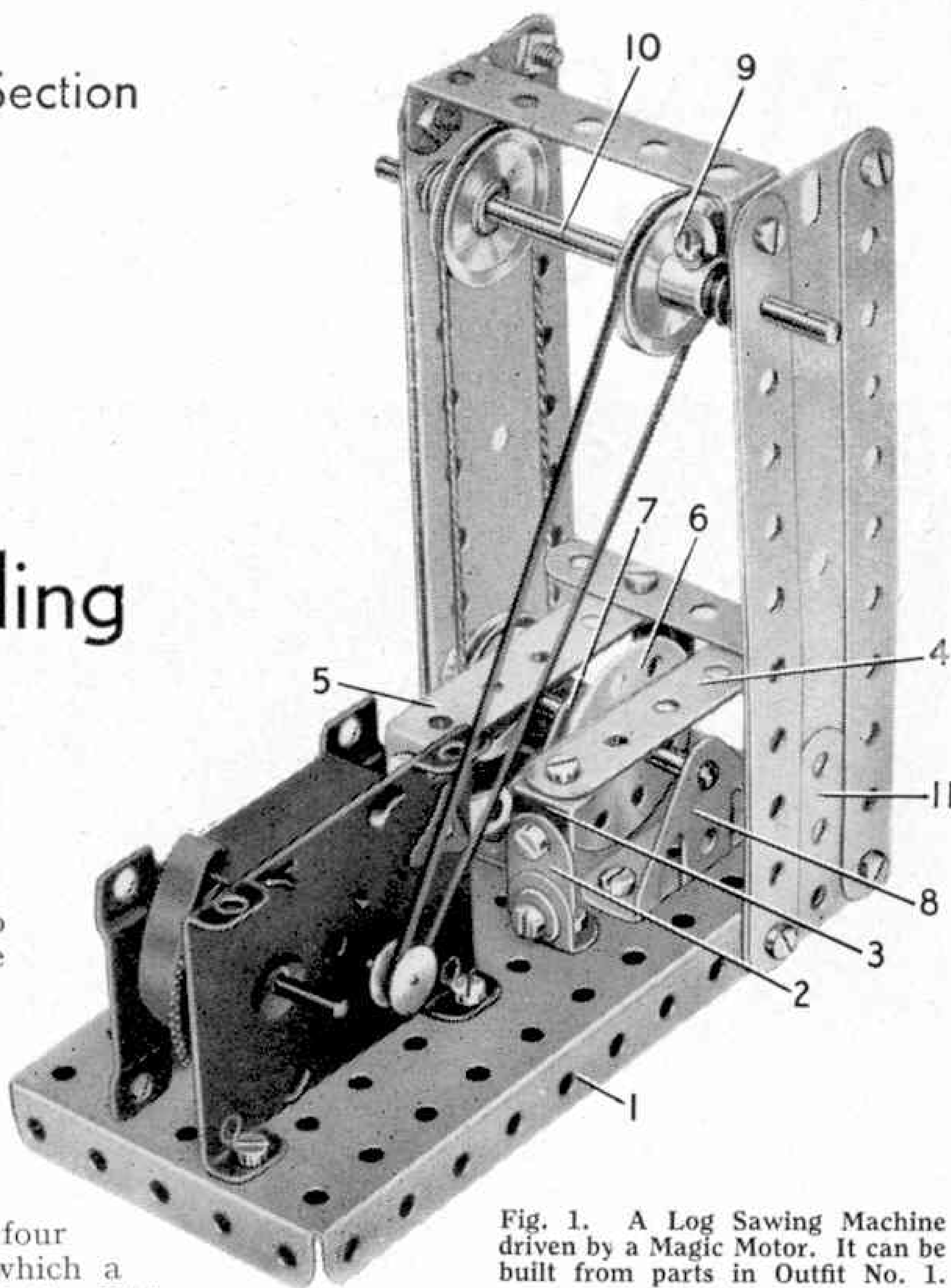


Fig. 1. A Log Sawing Machine driven by a *Magic* Motor. It can be built from parts in Outfit No. 1.

by a Driving Band with the 1" Pulley on the axle of the Bush Wheel 6.

Parts required to build the Log Saw:—
4 of No. 2; 2 of No. 5; 4 of No. 10; 6 of No. 12; 1 of No. 16; 1 of No. 17; 3 of No. 22; 1 of No. 24; 29 of No. 37A; 24 of No. 37b; 6 of No. 38; 1 of No. 40; 2 of No. 48A; 1 of No. 52; 4 of No. 111c; 2 of No. 126; 2 of No. 126A; 2 of No. 189; 1 *Magic* Motor.

"Try Your Strength" Machine

The model seen in Fig. 2 is a representation of a familiar "Try your Strength" machine that can be found in many amusement arcades and fairgrounds. The object is to try and force the $\frac{1}{2}''$ Pulley as far up the vertical column as one can by striking a blow on the 1" Pulley 7. The stronger the blow the higher the $\frac{1}{2}''$ Pulley will go and it is good fun for two or more boys to have "goes" in turn and endeavour

to be the first to force the $\frac{1}{2}$ " Pulley to the top. The model can be built from an Outfit No. 2, with the addition of one $\frac{1}{2}$ " Pulley (Part No. 23).

The construction of the model is started by bolting a $2\frac{1}{2}$ " \times $1\frac{1}{2}$ " Flexible Plate to each longer flange of a $5\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flanged Plate, which forms the base. A Fishplate is fixed to each upper corner of the Flexible Plates, the same bolts holding a $2\frac{1}{2}$ " Strip on each side. Two $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strips 1 and 2 are bolted at their lugs to the Fishplates and a $2\frac{1}{2}$ " \times $2\frac{1}{2}$ " Flexible Plate is then fixed to the Double Angle Strips as well as a Reversed Angle Bracket and a built-up reversed angle bracket 3.

Two Trunnions 4 are now bolted to the base as shown and in their apex holes a 2" Rod is mounted. This Rod carries two 1" Pulleys, between which is a $2\frac{1}{2}$ " Strip 5 held by a Spring Clip on each side. The Rod passes through the centre hole of the Strip 5 which is lengthened by a second $2\frac{1}{2}$ " Strip that overlaps the Strip 5 by two holes. Two $2\frac{1}{2}$ " Stepped Curved Strips 6 are arranged one on each side of the $2\frac{1}{2}$ " Strips and fixed to them by bolts.

A 2" Rod, with a 1" Pulley 7 fixed on one end and a Bush Wheel on the other, is mounted in the built-up reversed angle bracket 3, Reversed Angle Bracket and $2\frac{1}{2}$ " \times $\frac{1}{2}$ " Double Angle Strip 2. The next step is to bolt two built-up 11" strips to the end flange of the base, leaving a gap of about half-an-inch between them. At their upper ends these strips are each bolted to a Flat Trunnion.

A $\frac{1}{2}$ " loose Pulley is slid in between the 11" strips and when the 1" Pulley 7 is struck the Bush Wheel fixed on the same Rod forces down one end of the $2\frac{1}{2}$ " Strip 5, and as this is pivoted on the Rod the other end rises. Thus the Stepped Curved Strips will strike the $\frac{1}{2}$ " Pulley and shoot it upwards. The harder the Pulley 7 is hit the higher will the $\frac{1}{2}$ " Pulley travel.

Parts required to build the "Try your Strength" machine:—4 of No. 2; 6 of No. 5; 4 of No. 10; 2 of No. 12; 2 of No. 17; 3 of No. 22; 1 of No. 23; 1 of No. 24; 2 of No. 35; 38 of No. 37A; 38 of No. 37B; 8 of No. 38; 2 of No. 48A; 1 of No. 52; 2 of No. 90A; 1 of No. 125; 2 of No. 126; 1 of No. 126A; 2 of No. 188; 1 of No. 190.

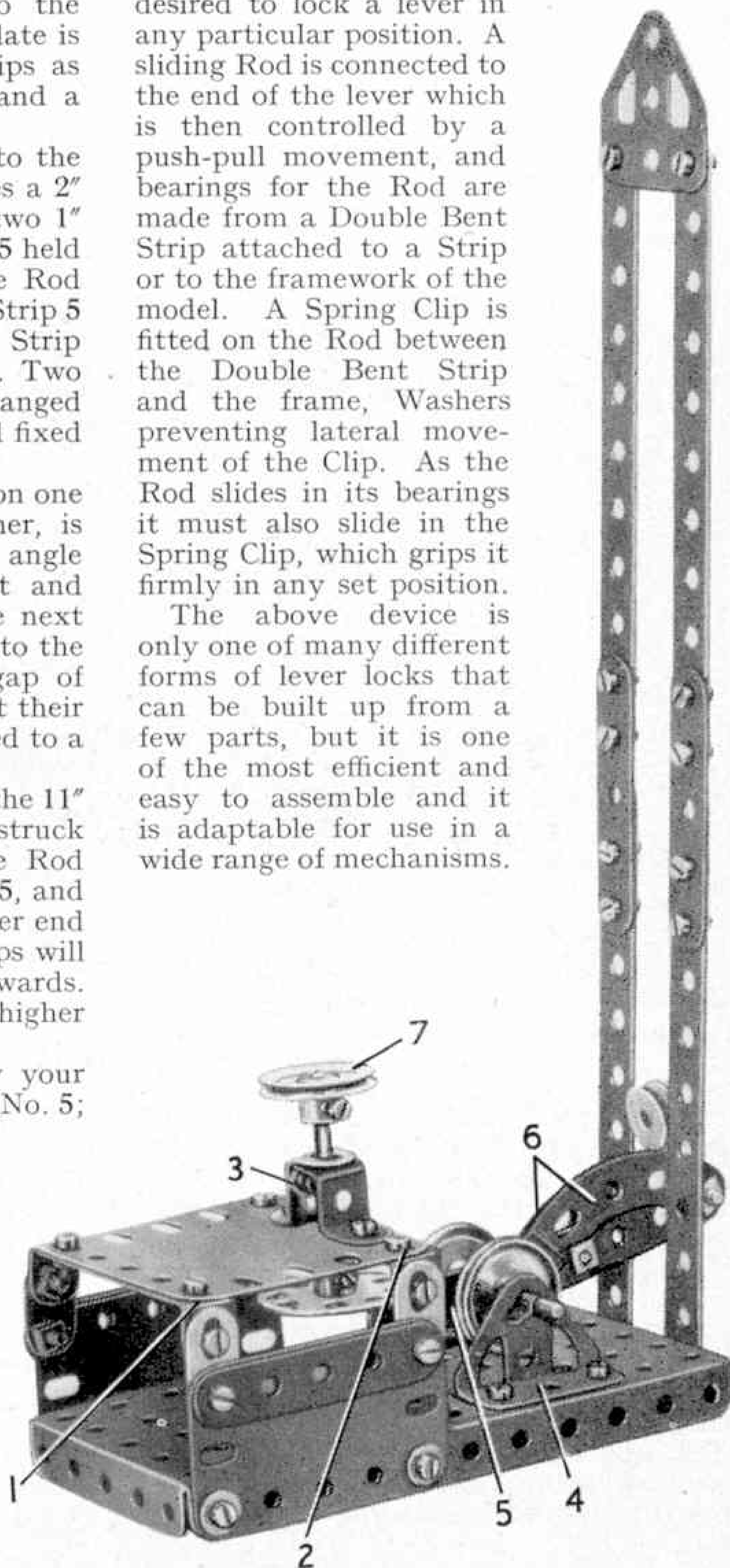
Fig. 2. "Try Your Strength" machine. A simple model of an amusement park device that will provide good fun for the builder and his friends. It is designed for construction from Outfit No. 2.

Locking Device for Brake Levers

With a strap-and-lever brake it is often desirable to lock the brake lever in position to maintain a certain tension on the brake band, and thus to give a constant retarding effort on the brake drum. The necessity for locking a lever in position is not confined to brake mechanisms only.

The device described here can be applied in most cases where it is desired to lock a lever in any particular position. A sliding Rod is connected to the end of the lever which is then controlled by a push-pull movement, and bearings for the Rod are made from a Double Bent Strip attached to a Strip or to the framework of the model. A Spring Clip is fitted on the Rod between the Double Bent Strip and the frame, Washers preventing lateral movement of the Clip. As the Rod slides in its bearings it must also slide in the Spring Clip, which grips it firmly in any set position.

The above device is only one of many different forms of lever locks that can be built up from a few parts, but it is one of the most efficient and easy to assemble and it is adaptable for use in a wide range of mechanisms.





DINKY TOYS

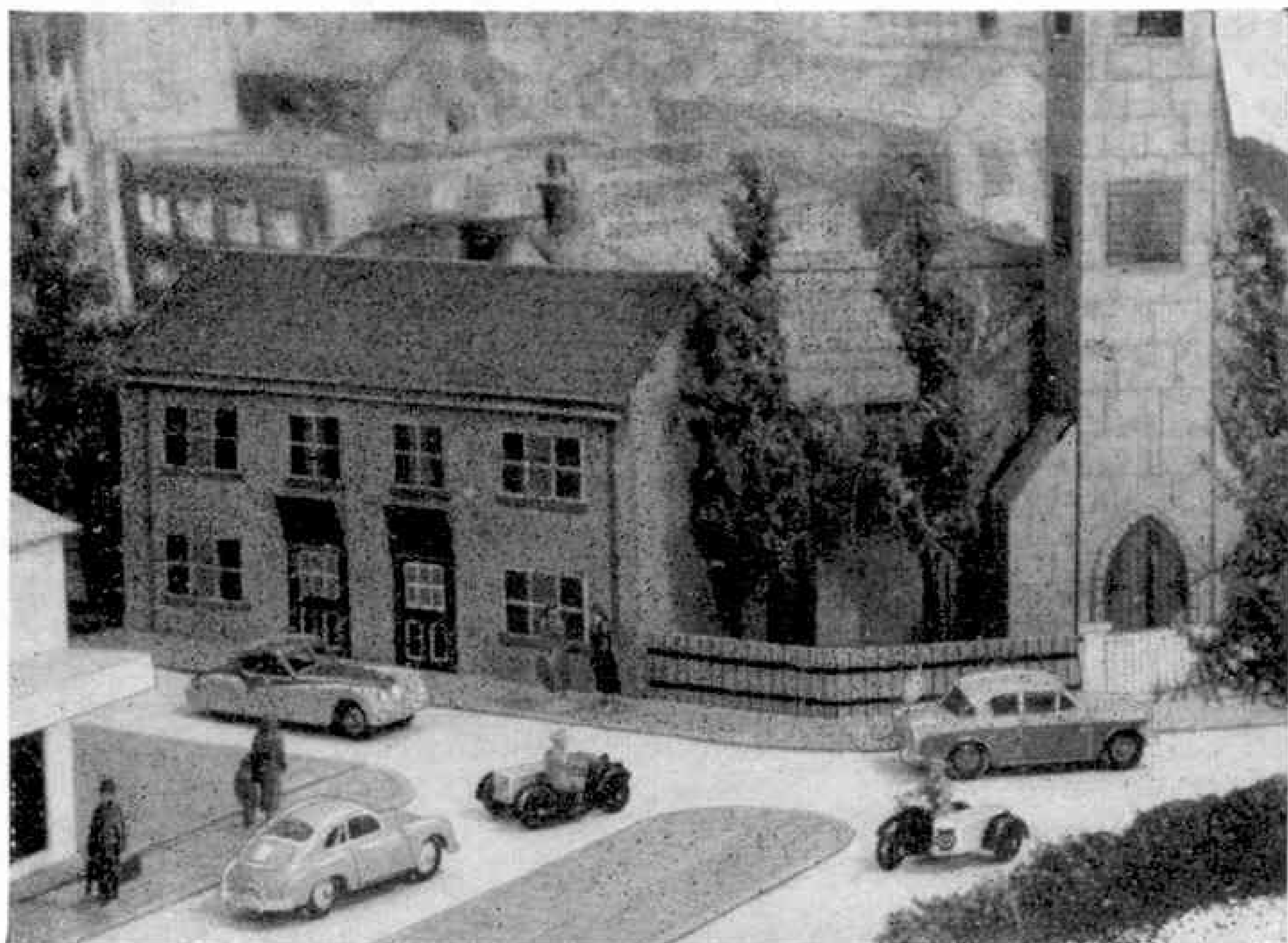
NEWS

By THE TOYMAN

THE Headquarters of the Dinky Toys Club in Binns Road has been a hive of industry during the past two months as thousands of applications have flowed in for the new Dinky Toys Collector's Licence for 1959-60. These have been dealt with as quickly as possible and new ones are pouring in daily. Unfortunately, the trouble

and Supertoys, and each item is classified in an appropriate group so as to facilitate easy reference. For instance, you can refer quickly to the sections in which commercial vehicles, racing cars, aeroplanes or any other type of Dinky Toys are listed. In addition, the new Licences contain more pages and more information on Dinky Toys motor cars and lorries.

In case you did not see the important announcement in the July *M.M.*, concerning our new prize scheme, I am repeating it here. As you know, for many months during the Licence Year now ended the famous racing motorist Stirling Moss chose a Dinky Toys Collector's Licence number from those that had already been issued, and the holder of the Licence bearing the number,



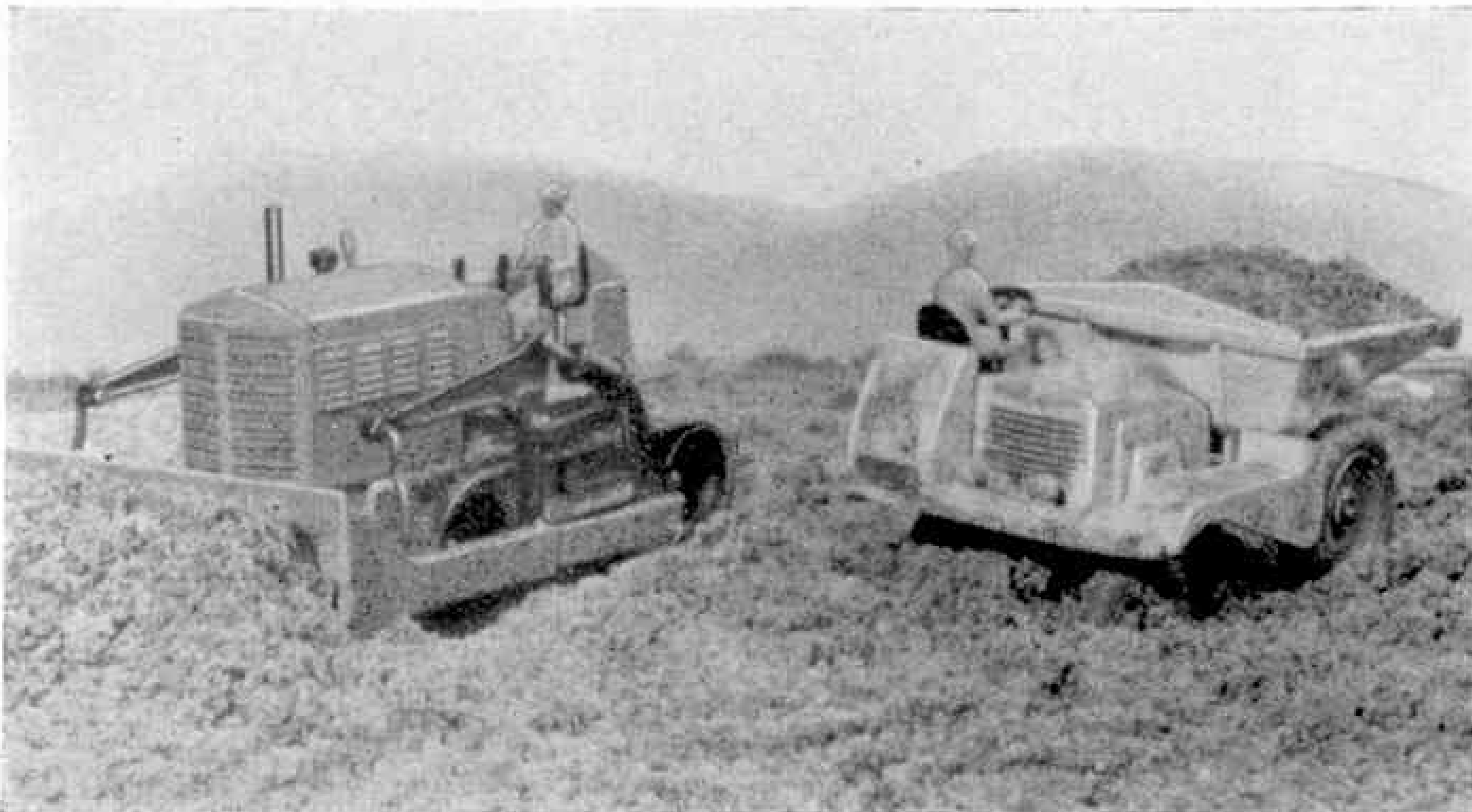
A well arranged town scene in which good use has been made of the Dinky Toys Pavement Set to provide for those who travel on foot!

in the printing industry, now happily removed, held up the production of the Licences considerably, so that we were unable to despatch the Licences, and the accompanying News Letter, as quickly as we would have liked to have done. However, all applications are being dealt with in rotation, and everyone who has applied for his new Licence has either already been supplied or will receive it in the very near future.

The new Licences are better and more useful than ever. They give the names and catalogue numbers of existing Dinky Toys

together with his parents, and on some occasions his brothers and sisters, was invited to spend a happy day at our Works in Liverpool. It has now been decided that instead of picking out *one* Dinky Toys Collector's Licence number monthly, as many as *ten* will be chosen, and to the holders of the Licences bearing these numbers Dinky Toys of the holder's own choice up to the value of £2 2s. 0d. will be awarded.

This will be done every month until further notice; so make sure that you have an opportunity of winning one of these fine



A realistic road-making scene arranged by D. Childs, Stanmore, Middlesex.

prizes by writing at once to The Secretary, The Dinky Toys Club, Binns Road, Liverpool 13, for a Licence if you have not already got one.

Now look at the illustration opposite. In any busy town where the streets are very narrow a single car in trouble would cause quite a serious traffic jam. Fortunately, at the time the picture was taken there were two A.A. Patrolmen in the area, so that timely assistance would be forthcoming to convert chaos into order and set traffic flowing freely again!

Douglas Childs of Stanmore, Middlesex, sent me some time ago the photograph

that I have reproduced as the upper illustration on this page. It shows two of his Dinky Supertoys performing work of the actual type for which their prototypes were designed. At first glance his picture is seen to be like a photograph of the real thing, and I think he is to be congratulated on his very fine effort. You will have recognised

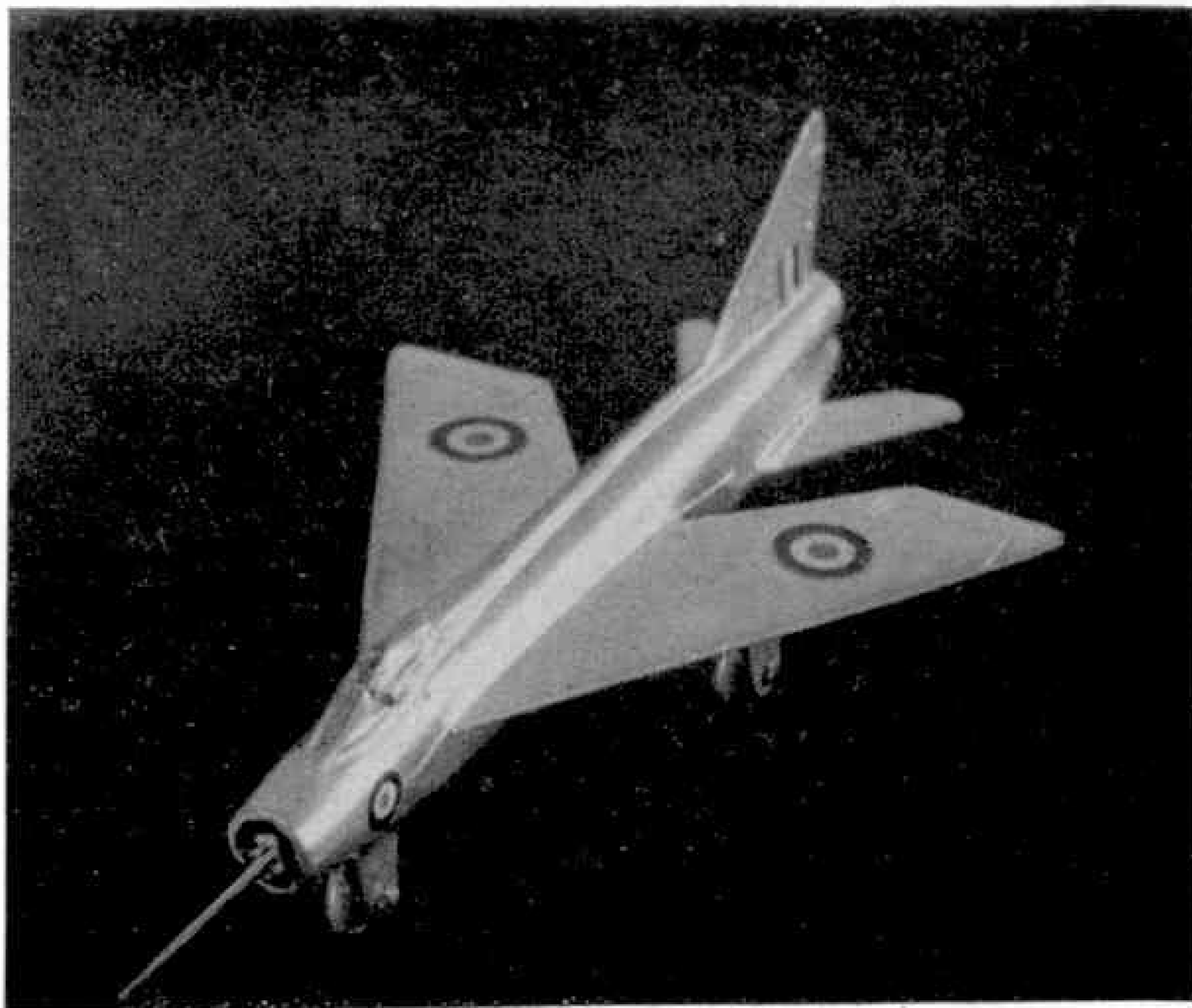
the models in the scene as the Dinky Supertoys Blaw Knox Bulldozer No. 961 and the Muir-Hill Dumper Truck No. 962.

And now I've got a novelty for you. Just take a glance at the Dinky Toys Race Track scene in the illustration at the foot of this page. At first glance you will think it an ordinary picture of such a scene, but if you look closely you will soon come to the conclusion that whoever was responsible for the layout must have been crazy! Actually it is bristling with errors, and it is these I want you to try and spot. I will give small prizes for the best lists of mistakes sent in to me by 30th September.



The crazy race track scene that forms the subject for the novel competition of which details are given above.

The P.1B Lightning Fighter, Dinky Toys No. 737, "in full flight".



Now I must give you all the latest information about three new items that have been included in the Dublo Dinky Toys and Dinky Toys ranges this month. They are quite varied in type. For aeroplane lovers there is a really superb miniature of the famous English Electric P.1B Lightning Fighter. Secondly comes a miniature of the Massey-Harris-Ferguson Tractor, which is designed to the scale of Hornby-Dublo Trains and is included in the growing range of Dublo Dinky Toys under list No. 069. Finally comes the third item, and this is one that thousands of Dinky Toys layout-makers have been waiting for. It is the very attractive and colourful Road Hoarding seen in the lower illustration on this page.

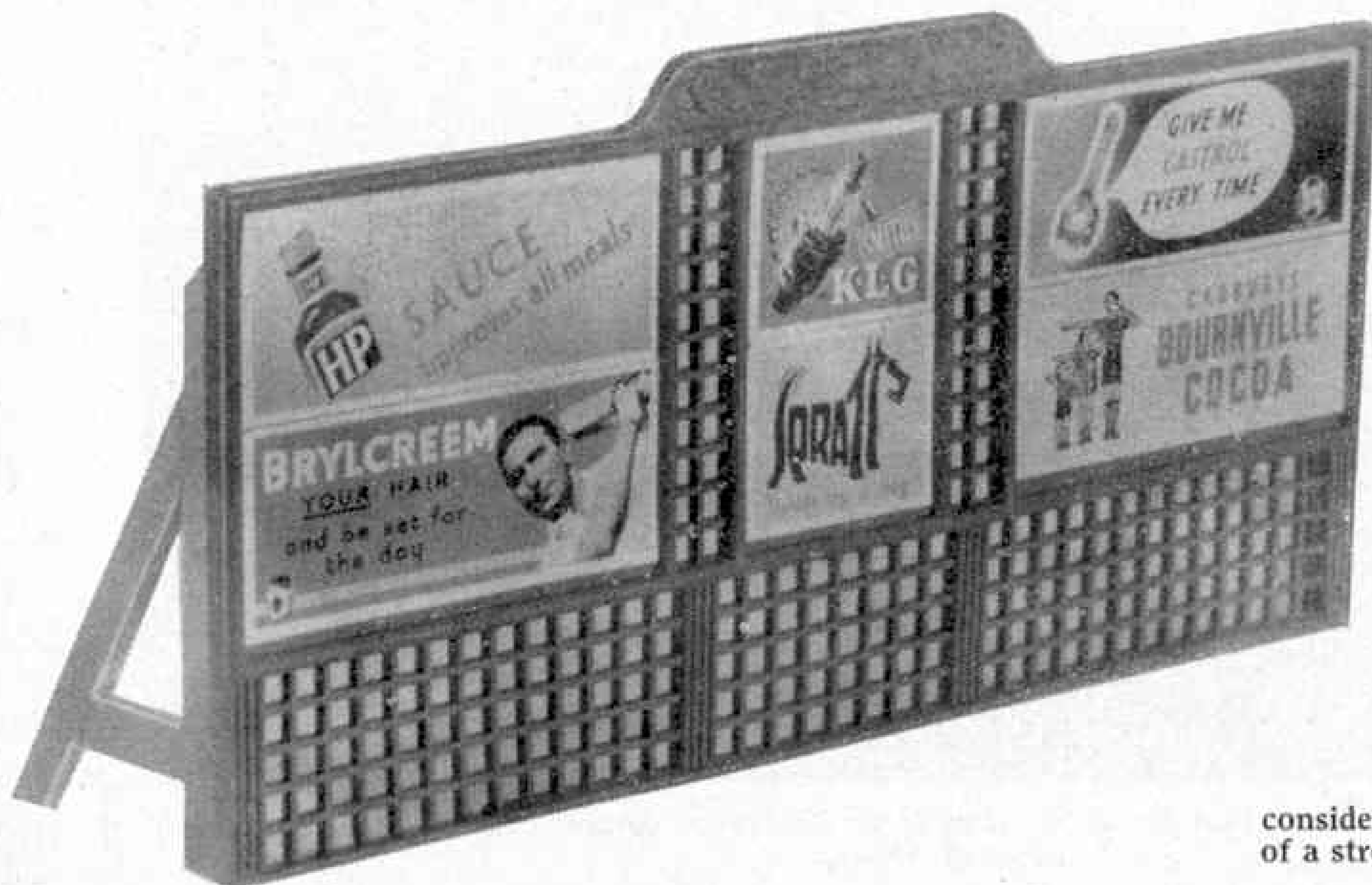
This last and very appealing new item is listed as Dinky Toys No. 765, and it has been designed specially for use in Dinky Toys road layouts. It is 8 in. long and has an overall height of 3½ in. and is beautifully moulded in brilliant green plastic, with back struts. The advertising poster panels are specially designed to take any of the miniature posters available as Hornby Railway Accessories.

The new Hoarding is just the thing to fill up odd corners of layouts, and two or three of them used to line a roadway will give a fine air of realism to the scene.

The English Electric Lightning supersonic all-weather interceptor, which is represented by the new Dinky Toys No. 737, is now in production for the Royal Air Force, in which it will succeed the Hawker Hunter fighter. Performance details are secret, but during routine test flights by the company's test pilot, the Lightning has been flown at nearly twice the speed of sound.

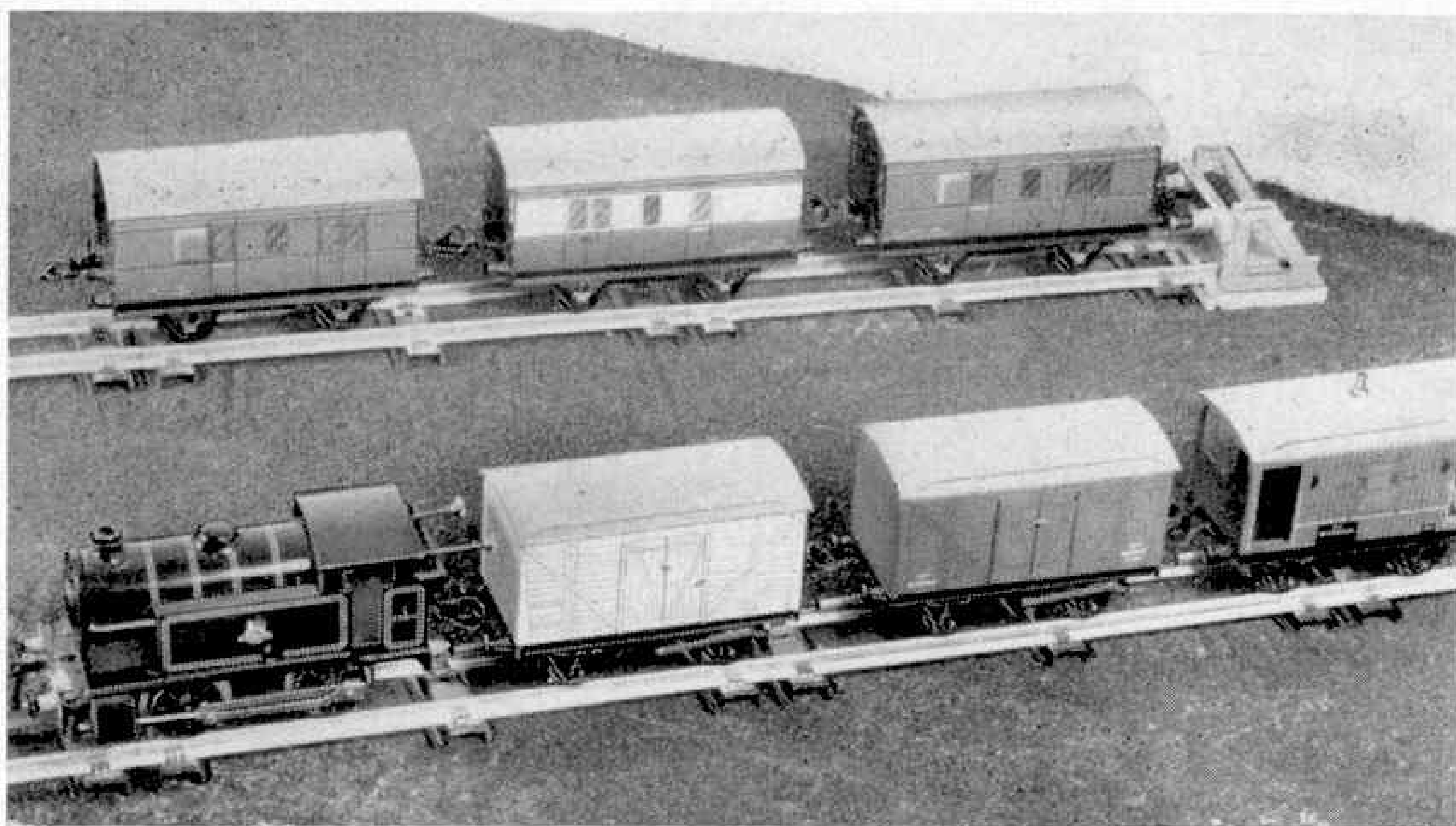
The Lightning is 50 ft. long, has a wing span of 34 ft. 10 in., and is powered by two Rolls-Royce Avon turbojets. If you look

at the picture of the model on this page, you will see that there is a "bulge" under the rear part of the fuselage. This represents the ventral fuel tank, which in the actual aircraft, can be
(Cont. on page 420)



The new Dinky Toys Road Hoarding No. 765. A few of these placed in appropriate positions will add

considerably to the realistic effect of a street layout.



"Tommy Dodd"
writes about:

Rail Ways

FROM wheels, which introduced our talk last month, we move to the closely related rails, without which there could be no railway. Hornby Rails have always had a special reputation for their stout character and lasting qualities, and for the smooth running that they provide throughout their life, so long as they are used with reasonable care.

On this topic, the lower illustration on the next page is of special interest as it shows some of the early Hornby Train equipment that is still used by Mr. A. I. Peddie, of Stirling. These have been referred to before in the *M.M.*, but I have no hesitation in doing so again because some of the pieces shown go back to the very earliest days of Hornby Trains nearly 40 years ago. It is interesting to see that the equipment includes the old type of rails. These can be distinguished in the picture because they have four narrow sleepers to each full straight rail, unlike the rails of today which have three somewhat stouter sleepers of special construction. Obviously these old rails, no less than the stock that runs on them, have been used with care throughout their lives.

The scene above shows Hornby Vans of various kinds, including a Goods Brake Van and, in the siding beyond, Nos. 41 and 51 Passenger Brake Vans.

This should encourage you to aim at obtaining equally good service from your present-day rails. Always be careful not to force them into awkward positions when trying out a new layout. Make sure to push them firmly together when joining individual sections of rail, and when the time comes to put your lines away draw them apart steadily and avoid "wagging" them from side to side in order to separate them. This is often done, I know, but it should be avoided as the practice tends to

open out the holes in the rail heads in which the connecting pins are meant to fit. Rails that are only loosely jointed can cause rough running

and sometimes can even lead to derailments.

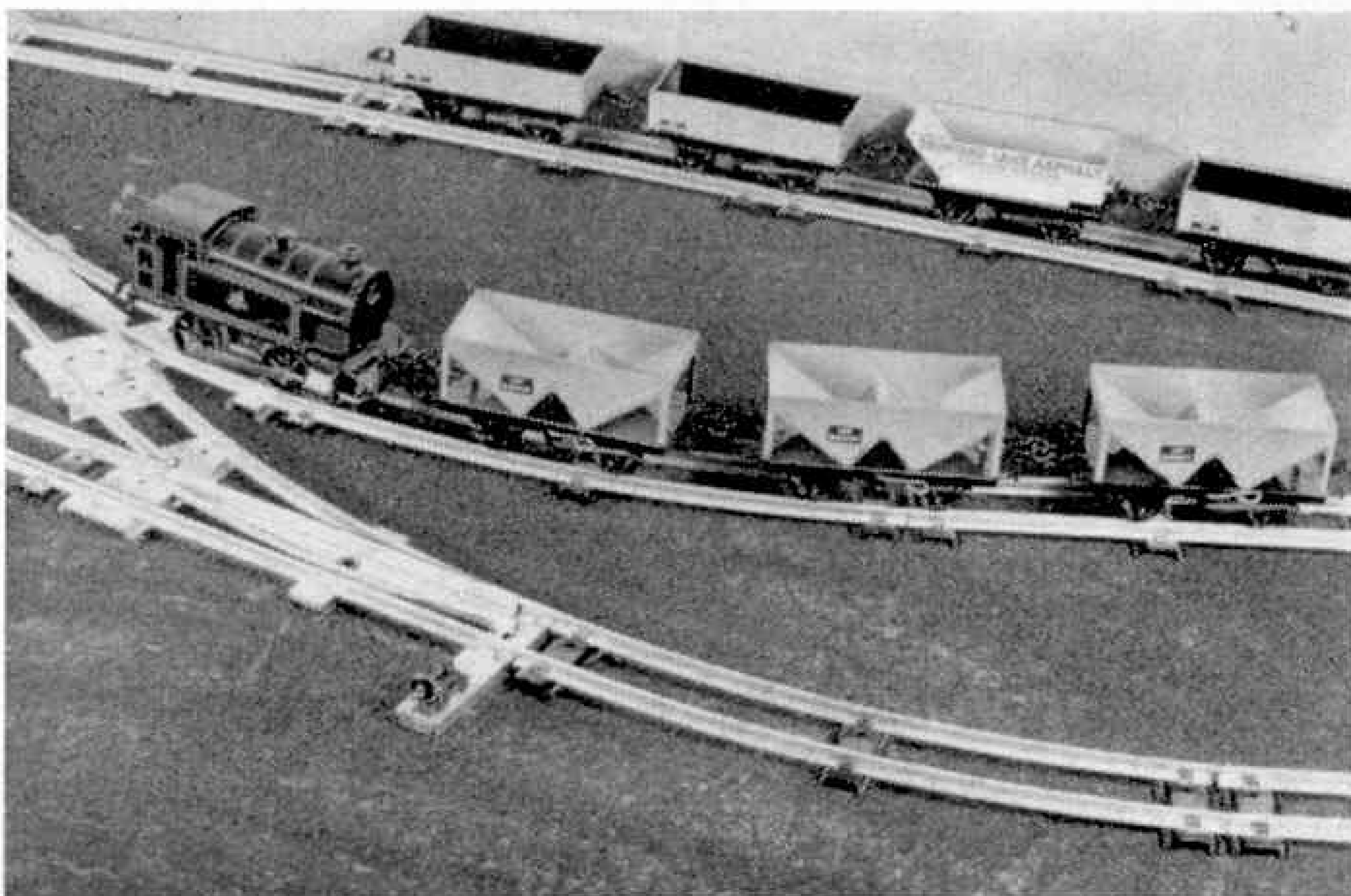
As with the wheels that we spoke about last month, it is necessary from time to time to clean the rails, particularly the rail heads over which the wheels pass. These tend to become slightly oily, particularly if you have been a little over-generous when lubricating your engines and rolling stock. The oil attracts dust and the two together do not improve train running. Oily rails cause locomotive driving wheels to slip, so your engine loses power and does not run as far as it should do. Rails on

which the combined oil-and-dust has accumulated somewhat provide a certain amount of resistance to the passage of the wheels of the train and what can be described as "woolly" running is the result.

Wipe your track then from time to time. A nice dry rag is all that is needed, as a rule. Make sure that the hollow ends of the rail heads are kept in good shape. A

little work with a pair of pliers now and again will help to keep things right. You should not find any rail connecting pins missing, but if you do replacements are obtainable from Meccano Ltd., at 6½d. per dozen, including postage and Purchase Tax.

Points require attention from time to time, but so long as you make sure that the tapered ends of the moving switch rails settle nicely against the fixed rails, no trouble should arise. Again, the other ends of the switch rails line up appropriately with the straight or curved lengths of the rail at what is known as the frog end of the Points, that is the opposite end from the Points lever. Do not forget to use the Points Connecting Clip, and the Rail Connecting Plates for that matter, which I have referred to in previous talks. These items do not appear in our pictures here because the Rails shown are screwed to a

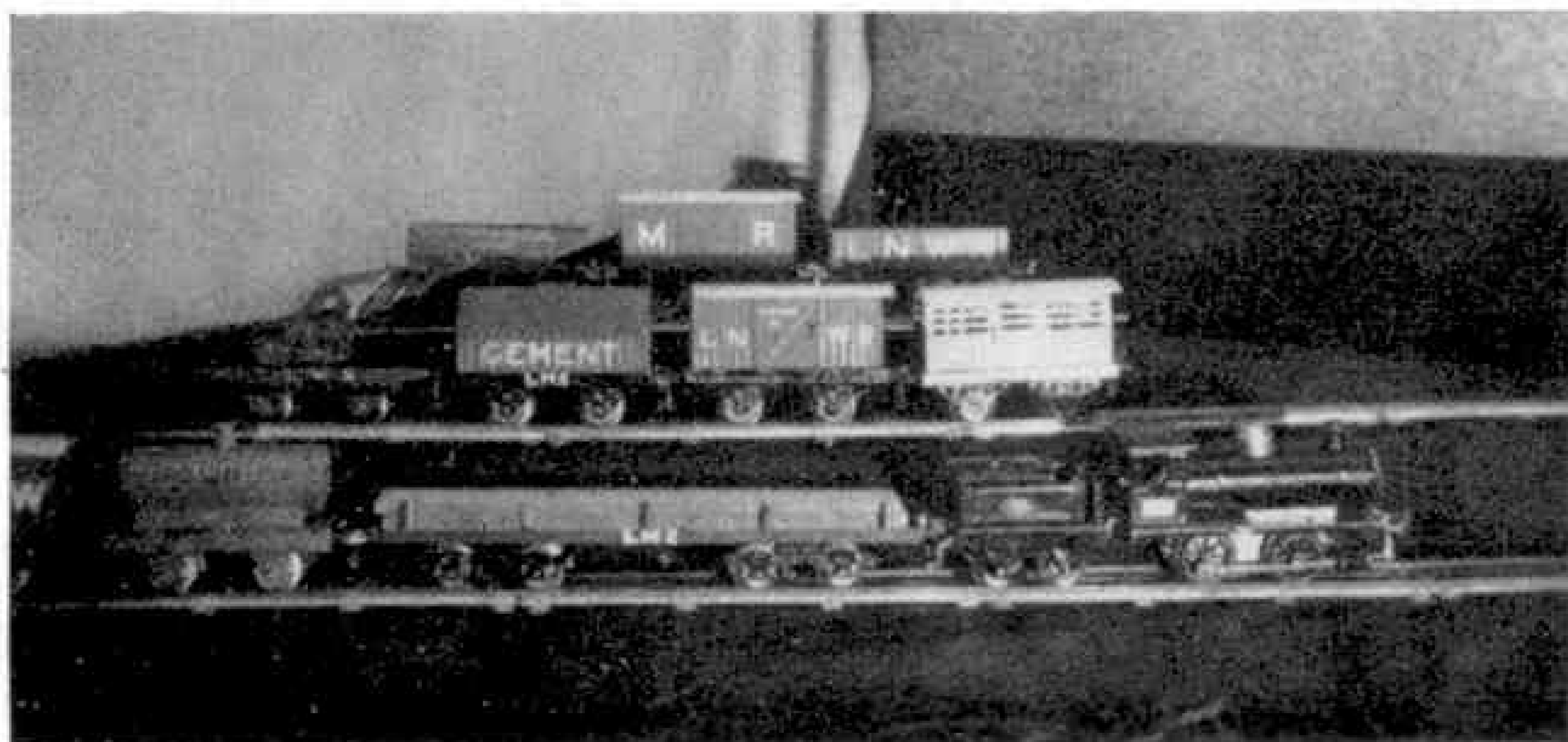


Empty Hopper Wagons being shunted before returning to the quarry or colliery sidings, where they will be "loaded" up again.

baseboard and in these circumstances the Clips and Plates are not really necessary. But they are required where the railway is put down on a table or floor just for the time being and has to be moved when train running is over.

Notice the differences between Mr. Peddie's early rolling stock and the vehicles of today in our pictures here. The two Vans in the centre of the third illustration, M.R. and L.N.W.R. respectively, are boldly lettered and recall the names of two of the railways incorporated in the former L.M.S. and now forming virtually the London Midland Region of British Railways. These old Vans are strong, but somewhat elementary and the No. 50 vans with which we are familiar are rather neater in general appearance and detail, while still having plenty of strength. The pairs of hinged doors, with their neat locking device, follow B.R.

practice and lend themselves to some effective platform scenes, as I have been able to show you from time to time in these pages. The doors also enable the miniature railway owner to load his Vans with freight and unload them again when necessary, thereby adding greatly to the fun of railway freight traffic operations.



Some of the early Hornby Railway equipment belonging to Mr. A. I. Peddie, Stirling, that is referred to specially in these pages.

A Summertime Competition

Picture-Making With Meccano Parts

HERE is a picture of an exciting moment in a football match, with the goalkeeper making a desperate but fruitless dive to stop the opposing centre forward from scoring. It is made entirely from a few simple Meccano parts bolted to a piece of cardboard, that serves as a background.

Can you build up an attractive picture in this way? If you can you may win a fine prize in our new Competition for the best Meccano pictures made by readers. This is open to readers of all ages and details of the prizes are given in the panel at the foot of this page.

It is not essential to stick to football, or in fact to any kind of game. Competitors may make any kind of picture they like and may use any number of parts in its construction. There are hundreds of subjects suitable for pictures and every model-builder will find it great fun to make them up. Those who wish to do so may increase the realism of their pictures by painting the cardboard background in suitable colours.

When your picture is complete make a good sketch of it, or have a photograph taken, and send this to *Meccano Picture Competition, Meccano Limited, Binns Road, Old Swan, Liverpool 13*. Write your name, address and age clearly on the back of the entry.

Entries must be posted in time to reach Liverpool not later than 30th November next. All prize-winners will be notified by letter as soon as possible after the closing date of the Competition. Prize-winning entries become the property of Meccano Limited, but unsuccessful entries will be returned if a stamped addressed envelope is sent.

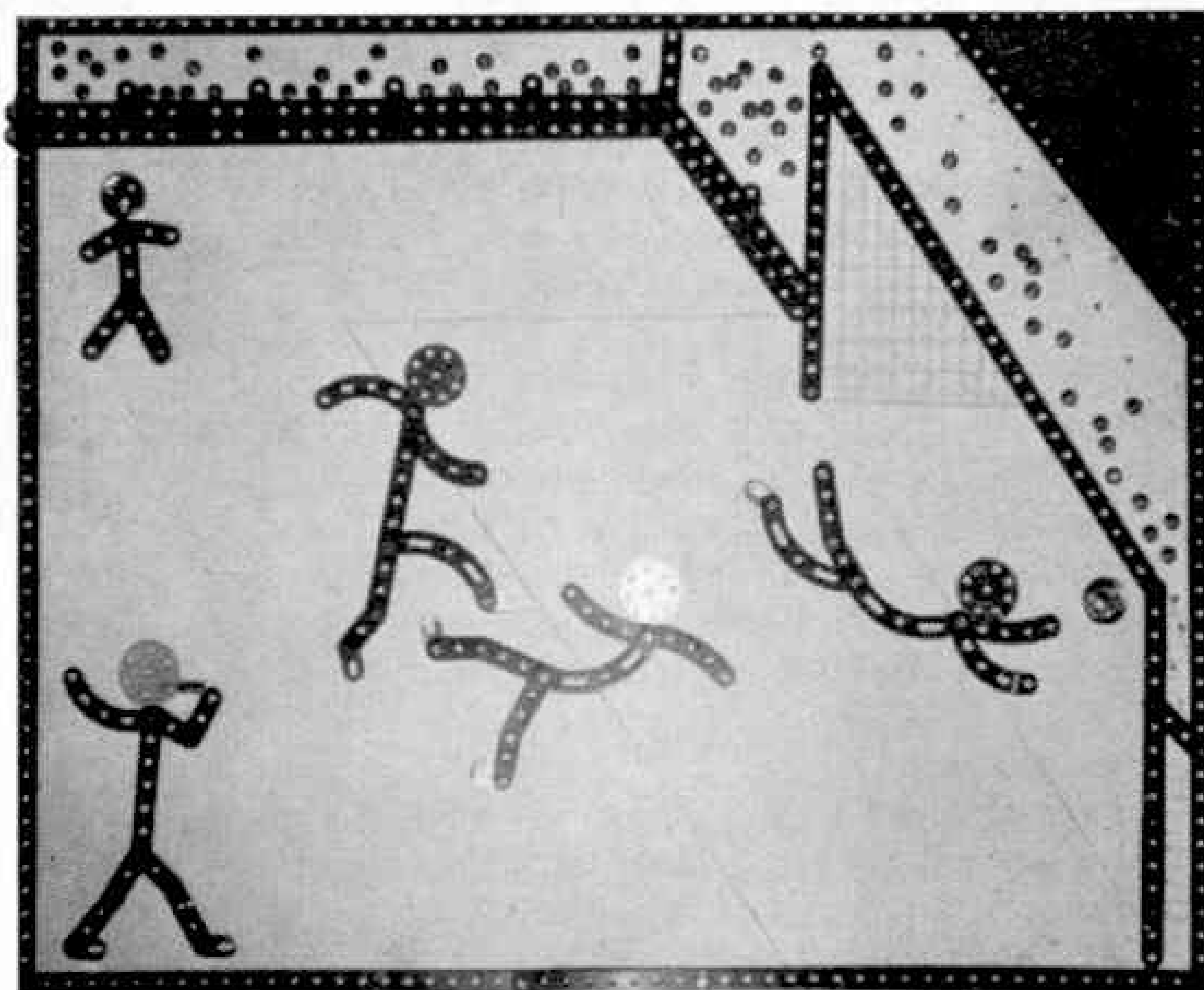
WINTER MODEL-BUILDING COMPETITION

List of Prize-winners

SECTION A

First Prize, Cheque for £4 4s. 0d.: A. Morgan, Lymm, Cheshire; Second Prize, Cheque for £2 2s. 0d.: M. J. Hankin, Hove 4, Sussex; Third Prize, Cheque for £1 1s. 0d.: Gerrit Geluk, Haarlemmermeer, Netherlands.

Ten Prizes, each of 10s.: R. A. Hibberd, Peterborough, Northants; P. Sharp, Cheadle, Cheshire; A. Robinson, Abingdon, Berks.; N. McEwan, Wallasey, Cheshire;



J. P. Stephenson, Portsmouth; W. Hall, Sutton Coldfield, Warwicks.; Pravin Chandra—P. Bakrania, Baroda, India; P. Graves, Norwich; I. Blair, Whangarei, New Zealand; A. Caffrey, Blackburn, Lancs.

Ten Prizes, each of 5s.: B. Whiteside, Palmerstown, Eire; I. MacDonald, Aberdeen; M. Francis, Leighton Buzzard, Beds.; B. J. Green, Birkenhead; G. Dunstan, Berks.; P. Colin, Newmarket, Cambs.; J. Donald, Atherstone, Warwicks.; H. M. Cubitt, Chandlers Ford, Hants.; G. Frith, Preston, Yorks.; R. J. Fowler, Norwich.

SECTION B

First Prize, Cheque for £4 4s. 0d.: M. Brookfield, Stoke-on-Trent, Staffs.; Second Prize, Cheque for £2 2s. 0d.: A. Konkoly, Budapest XIII, Hungary; Third Prize, Cheque for £1 1s. 0d.: F. Mahnen, Esch on the Alzette, Grand Duchy of Luxembourg.

Ten Prizes, each of 10s.: E. Feldmann, Leeds 7; K. Mooney, Napier, New Zealand; L. G. Carey, Bournemouth, Hants.; T. R. E. Latter, Dinas Cross, Pembrokeshire; B. W. Rowe, Newton Abbot, Devon; R. Slosse, Hoboken, Belgium; W. A. Nixon, Liverpool 17; P. Lauder, Combe Down, Bath; H. L. Roden, Truro, Cornwall; H. W. Henry, Rochester, Kent.

Ten Prizes, each of 5s.: Guiseppe Colnago, Bollengo, Pr. Torino, Italy; J. R. Maheux, Kitchener, Ontario, Canada; J. R. Wood, Pukekohe, New Zealand; J. Row, Callington, Cornwall; Ong Kiem Han, Djakarta, Indonesia; P. B. Thomas, Huyton, nr. Liverpool; A. Martin, Kirkcaldy, Fife; F. Piene, Montreal, Canada; C. W. Hedges, Scarisbrick, Lancs; J. E. Benson, Liverpool 14.

THE PRIZES OFFERED IN THIS COMPETITION

	£	s.	d.
First Prize, Cheque for	5	5	0
Second Prize, Cheque for	3	3	0
Third Prize, Cheque for	2	2	0
Fifteen Prizes, each of	10	0	
Fifteen Prizes, each of	5	0	
Closing date for Entries, 30th November, 1959.			

Among the Model-Builders

By "Spanner"

A Simple Flexible Coupling

Mr. J. F. Sharp, Huddersfield, contributes a suggestion for a simple flexible coupling unit for joining two shafts that should be of interest to advanced model builders. His idea is shown in the device illustrated in Fig. 1.

Two $\frac{1}{2}$ " \times $\frac{1}{2}$ " Angle Brackets 1 are bolted through their slotted holes by Bolts 2, each carrying two Washers, to a Gear Wheel 3 on the driving shaft.

A 1" diam. Rubber Ring 4 is squeezed in and located between Bolts 2 and the Angle Brackets 1 by means of nuts and bolts 5. This forms the flexible link. A Bush Wheel 6 on the driven shaft is fitted with two $\frac{1}{2}$ " Bolts 7, each Bolt carrying a loose Washer 8.

The Rubber Ring is looped around these Bolts so that the driven shaft is flexibly connected to the driving shaft.

Mr. Sharp used this device in connection

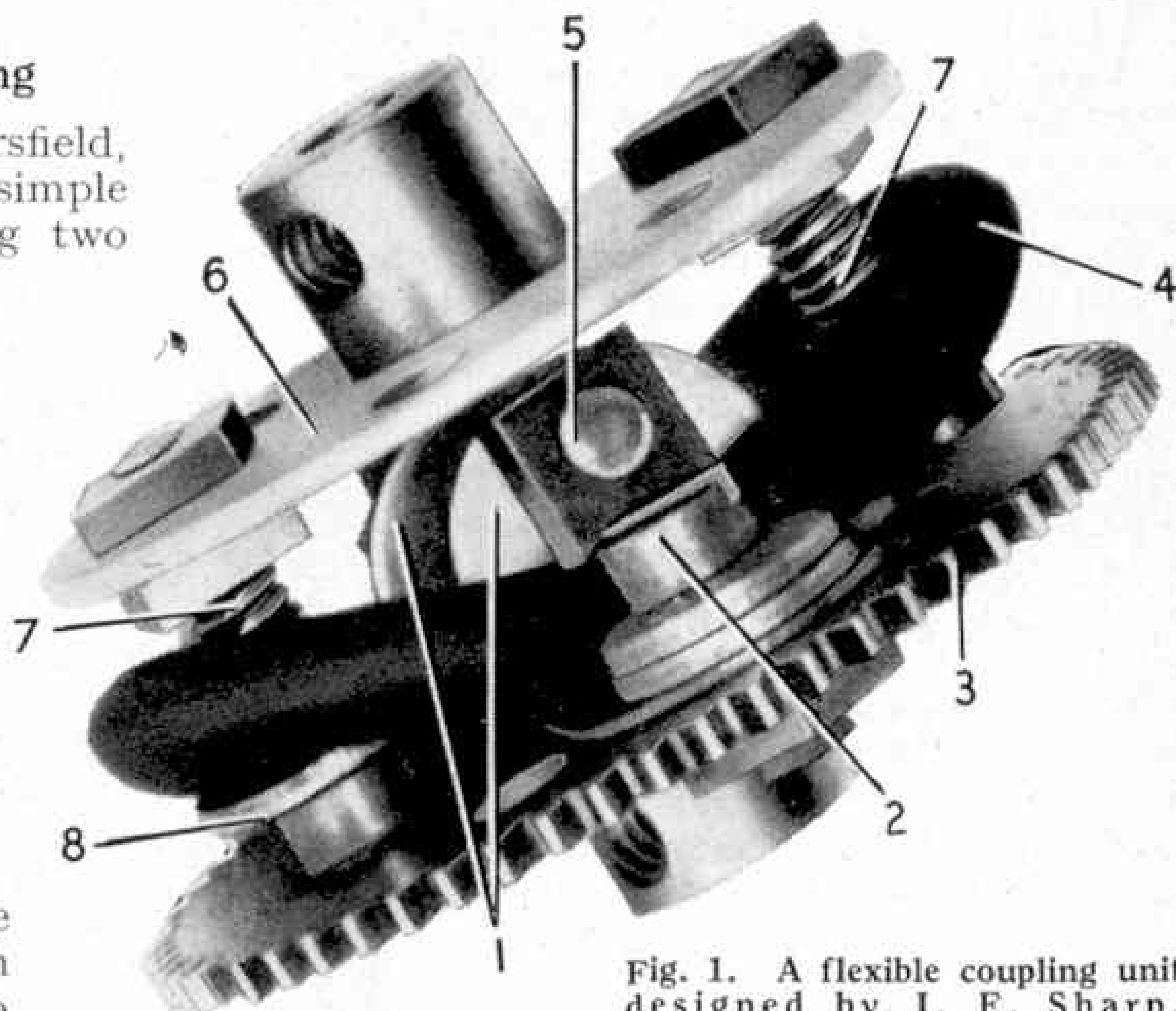


Fig. 1. A flexible coupling unit designed by J. F. Sharp, Huddersfield.

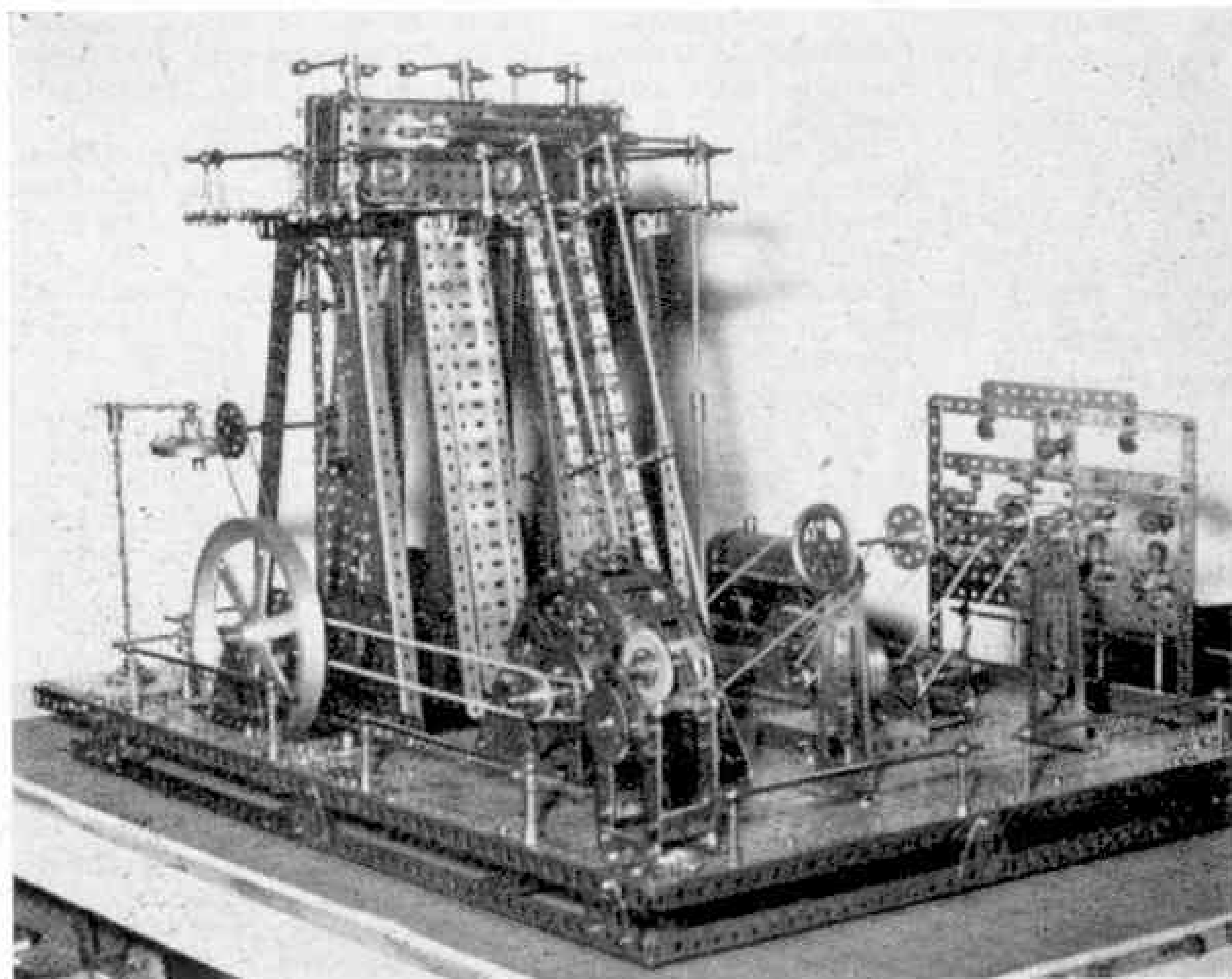
with a very ingenious automatic transmission mechanism that will be illustrated and described in these pages in due course.

Novel "Step-up" or "Step-down" Driving Gear

With the novel arrangement shown in Fig. 2 it is possible to obtain a "step-up" or "step-down" driving ratio of exactly 1 : 2 or 2 : 1. It is a version of a mechanism that was submitted by T. V. Vollenhoven, Eindhoven, Holland, as an entry for the "Meccano Mechanisms" Competition organised in the *Meccano Magazine* last year.

The mechanism is very simple to build but quite tricky to adjust correctly, and its construction should provide an interesting hour or so for those with the parts available to assemble it.

The general construction of the mechanism is shown quite well in the illustration

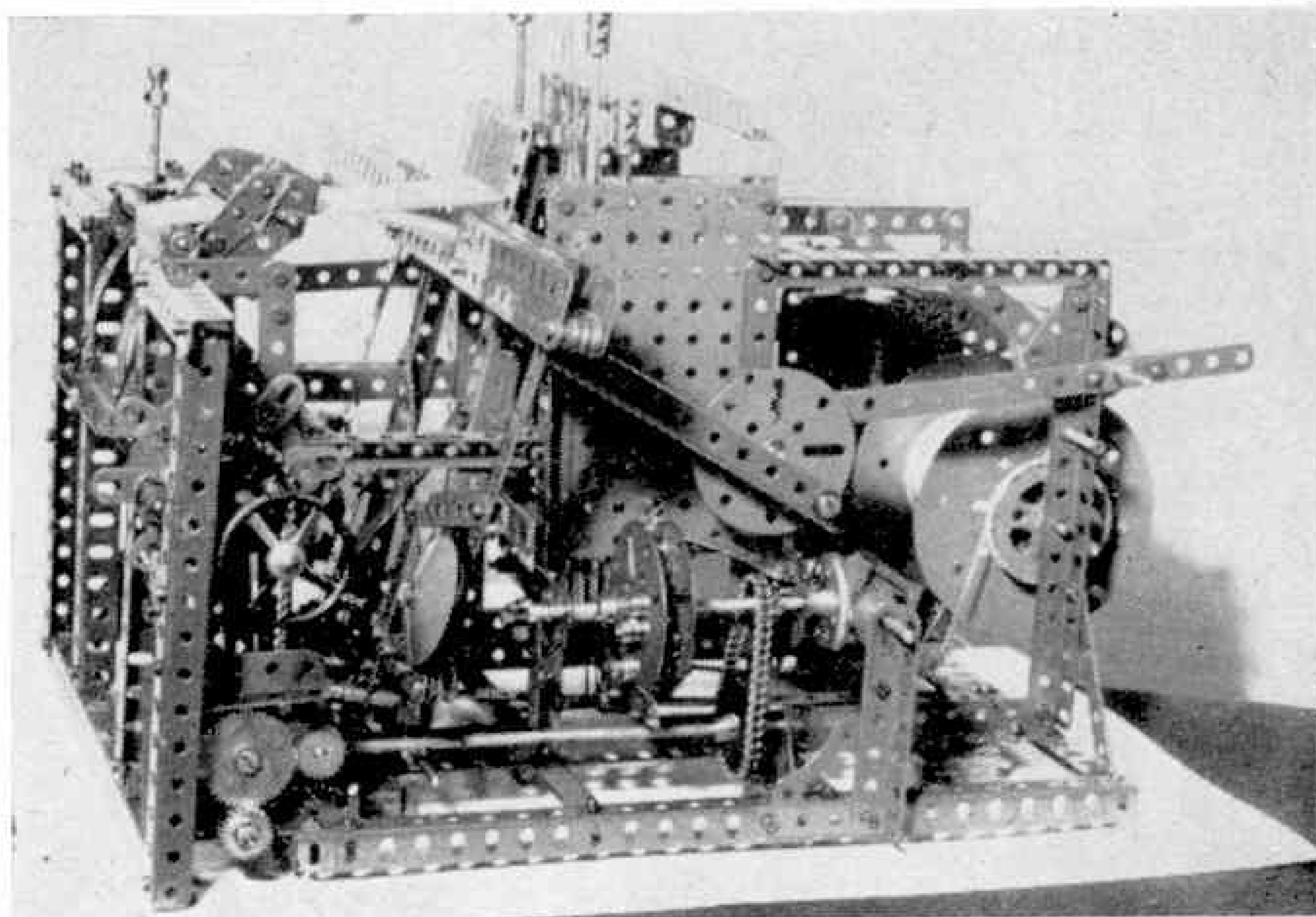


This is an attractive model of a special type of water pumping plant designed for raising excess water and discharging into irrigation canals. The model was built by Geom. Pietro Borsetto, Piove di Sacco, Padova, Italy.

so that a detailed description is not necessary and I will mention only one or two points that may not be quite apparent. The four 1" Corner Brackets are fixed to the Face Plate 1 by $\frac{1}{2}$ " Bolts, but each of them is spaced from the Face Plate by a Collar. Either of the shafts 2 or 3 can be used as the input shaft. Shaft 2 is mounted in the apex holes of two Flat Trunnions bolted to $1\frac{1}{2}$ " Angle Girders 7 and 8. The Double Arm Crank 4 on shaft 3 carries two Threaded Pins 5 and 6, which enter the gaps between the four Corner Brackets as the Face Plate rotates.

In order to make the device work smoothly and silently the Threaded Pins must move on exactly the circle that passes through the centre of the Face Plate. This can be adjusted by moving the Flat Trunnions that form the bearings for Rod 2, in the slotted holes of the $1\frac{1}{2}$ " Angle Girders 7 and 8.

While a device of this kind is of little practical use in actual model-building, owing to its bulk, it is nevertheless very fascinating to watch in operation and stimulating to those model-builders who are interested in curious mechanisms, as there is



A fine loom, full of interesting details. It was built by Mr. L. Yeoman, Bolton and was an exhibit at an Exhibition in London recently.

plenty of scope for experiment in this direction.

A Fine Model Loom

One of the exhibits at the "Education and Careers Exhibition" held in London this year was a fine model loom built by Mr. L. Yeoman, Bolton, Lancs. Mr. Yeoman is a textile student, who was awarded a Cotton Board Scholarship, and his model represents the spare-time work of several months. On hearing of his model the Cotton Board decided to include it as one of the exhibits on their Stand at the Exhibition, which included displays by schools, firms and various industrial organisations on a multitude of subjects from further education to careers in the Cotton industry.

The model was based on one that appeared in the *Meccano Magazine* some time ago, but Mr. Yeoman has modified this quite considerably in order to incorporate his own methods of construction and various improvements which he claims have resulted in a model that weaves with a high degree of efficiency. I congratulate Mr. Yeoman on his excellent workmanship.

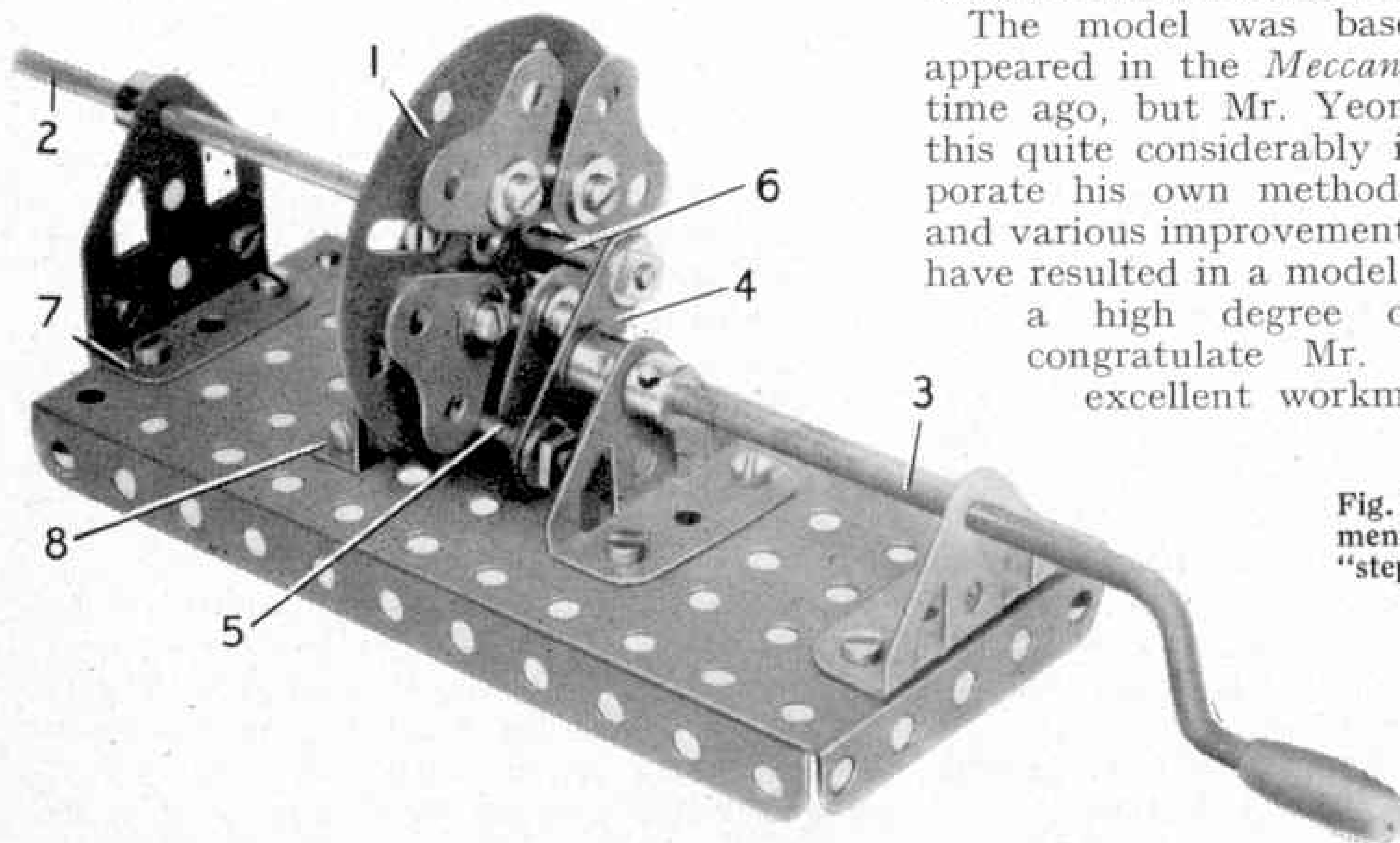


Fig. 2. The novel arrangement shown here gives a "step-up" or "step-down" driving ratio of exactly 1 to 2 or 2 to 1. It is based on a mechanism submitted by T. V. Vollenhoven, Eindhoven, Holland.

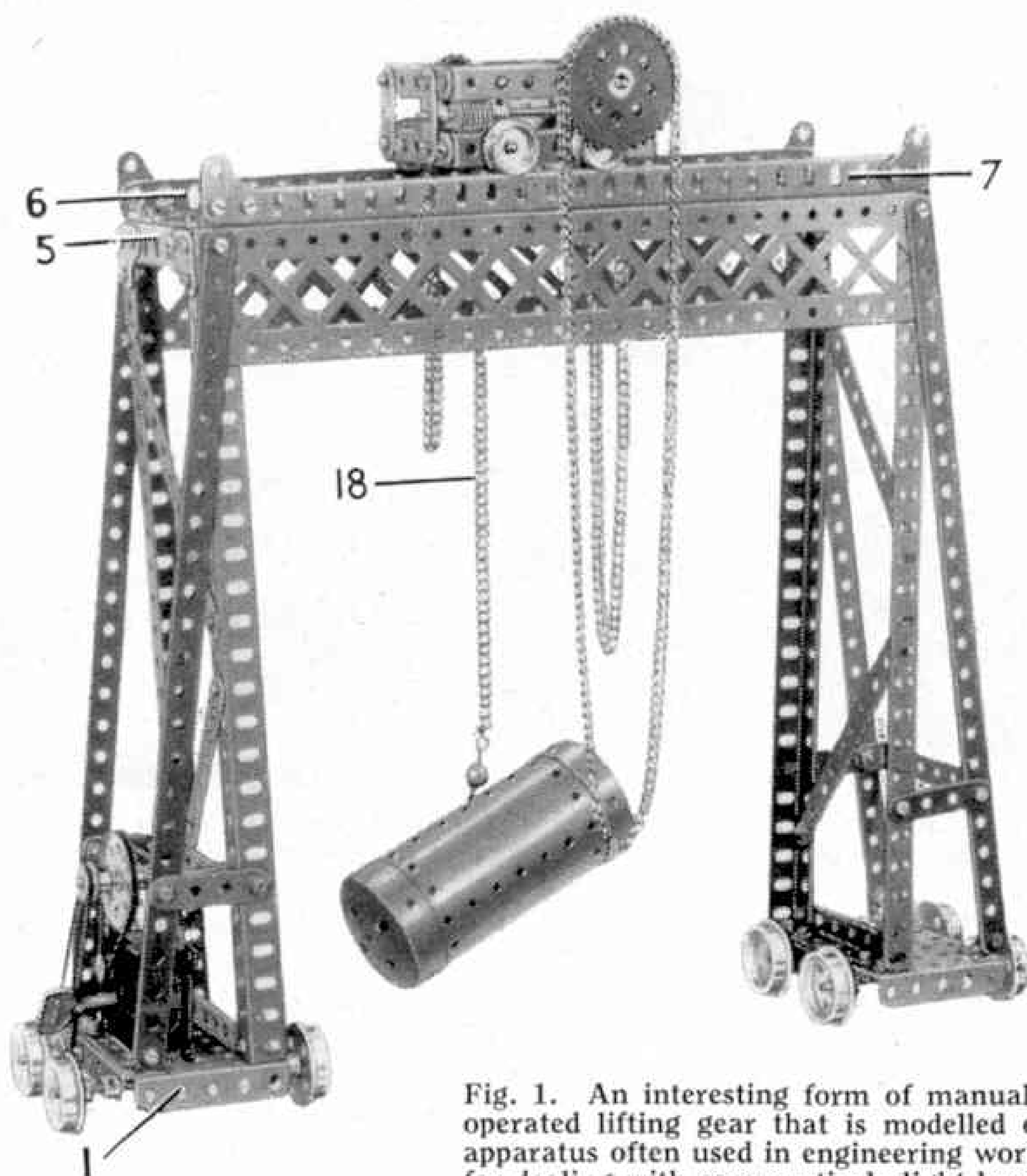


Fig. 1. An interesting form of manually operated lifting gear that is modelled on apparatus often used in engineering works for dealing with comparatively light loads.

Hand Operated Hoist and Gantry

The construction of the base for the other tower is similar except that the 1" Pulley is omitted from the wheel axle and $3\frac{1}{2}$ " Rods are used instead of $4\frac{1}{2}$ " Rods. Also the *Magic* Motor is omitted.

The two inner legs of each tower consist of $12\frac{1}{2}$ "

THE Hand Operated Hoist and Gantry that is shown in Fig. 1 represents a useful type of lifting gear that is often employed in stockyards and engineering works for lifting and transporting light loads. In actual practice the Gantry is usually traversed along rails by means of a small motor, while the load lifting hoist is manually operated. In larger installations of this kind the hoist also is motor driven, but our model is a manually operated type. The hoisting gear is carried on a trolley that travels on rails on the gantry span.

It is best to commence construction of the model by building the two towers that support the gantry. As seen in Figs. 1 and 2, the left-hand tower consists of a base formed by a $3\frac{1}{2} \times 2\frac{1}{2}$ " Flanged Plate 1 to which two $2\frac{1}{2}$ " Angle Girders are fixed along each side. These Girders provide the bearings for two $4\frac{1}{2}$ " Axle Rods that carry the travelling wheels, which are $1\frac{1}{8}$ " Flanged Wheels. One of the Rods carries also a 1" Pulley with boss 2. A *Magic* Motor is now bolted to the Flanged Plate as shown and to the start and stop lever of the Motor a $\frac{1}{2}$ " Reversed Angle Bracket 3 is attached. At the other edge of the Flanged Plate a $3\frac{1}{2}$ " Angle Girder 4 is fixed.

Angle Girders bolted at their lower ends to the $3\frac{1}{2}$ " Angle Girders 4. The two outer legs on each tower are $12\frac{1}{2}$ " Strips attached to the base by Angle Brackets. At the top ends the Strips are bolted to the $12\frac{1}{2}$ " Angle Girders, the same bolts holding in place also a $12\frac{1}{2}$ " Braced Girder on each side of the gantry.

The upper ends of the $12\frac{1}{2}$ " Angle Girders of each tower are joined by a $3\frac{1}{2}$ " Angle Girder 5, which is braced to the $12\frac{1}{2}$ " Girders by means of 1" Corner Brackets. The top of the two towers are joined on each side by a $12\frac{1}{2}$ " Angle Girder 6 and 7. These form the running rails for the hoist trolley and they are provided with stops at each end formed by 1" Corner Brackets as shown.

The two towers are braced by means of $5\frac{1}{2}$ " and 2" Strips as shown.

The framework of the hoist trolley consists of four $3\frac{1}{2} \times \frac{1}{2}$ " Double Angle Strips, four $2\frac{1}{2}$ " Strips and four $1\frac{1}{2}$ " Strips. Through holes in the lower pair of Double Angle Strips two $3\frac{1}{2}$ " Axle Rods are passed and these carry the four $\frac{3}{4}$ " Flanged Wheels in which the trolley runs. One of the Rods carries also a 57-tooth Gear 8, which engages a $\frac{1}{2}$ " Pinion 9 mounted on a 4"

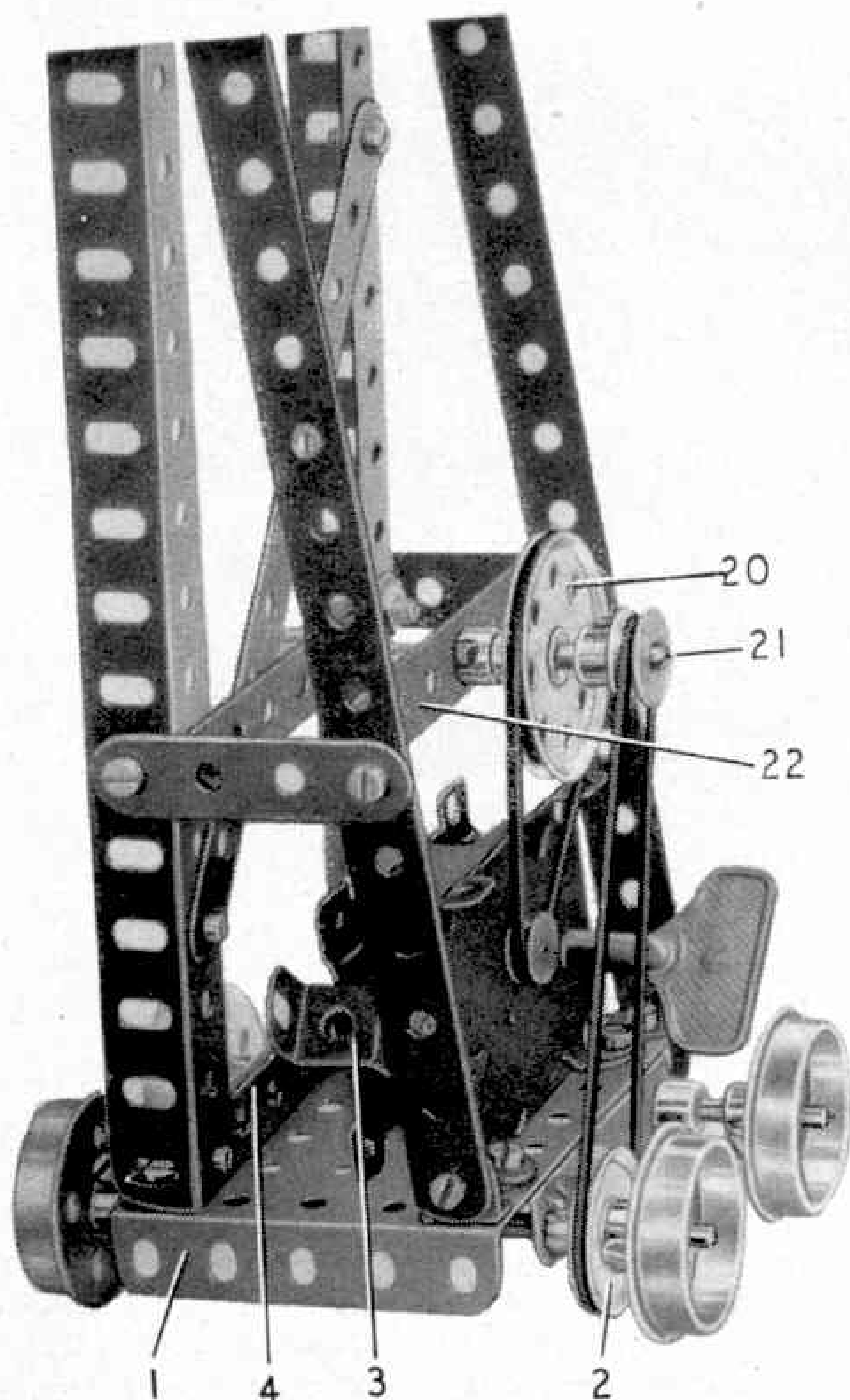


Fig. 2. The base of the gantry tower to which the Magic Motor is fitted.

Rod 10. This Rod carries also a 2" Sprocket Wheel 11, and is retained in place in the framework by Collars arranged as shown.

A 4" Rod 12 is mounted in one pair of 1½" Strips and on it is fixed a Worm 13 and a 1" Sprocket Wheel 14. The Worm meshes with a ½" Pinion 15 fixed on a 3" Rod 16 that carries also a ¾" Sprocket Wheel 17. Endless belts of Sprocket Chain are fitted to each Sprocket 11 and 14. Another length of chain 18 is clamped at one end to the framework by means of a

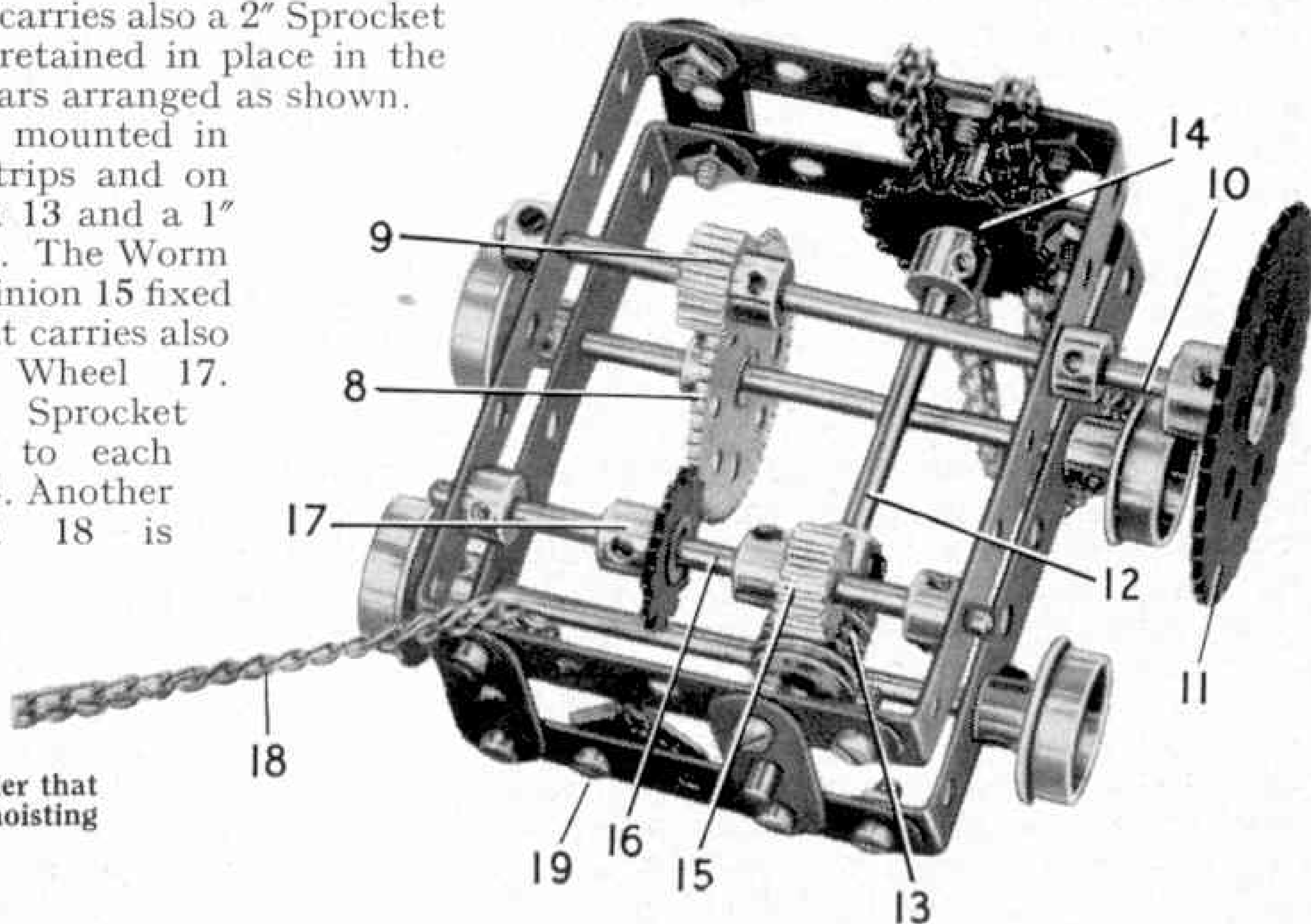


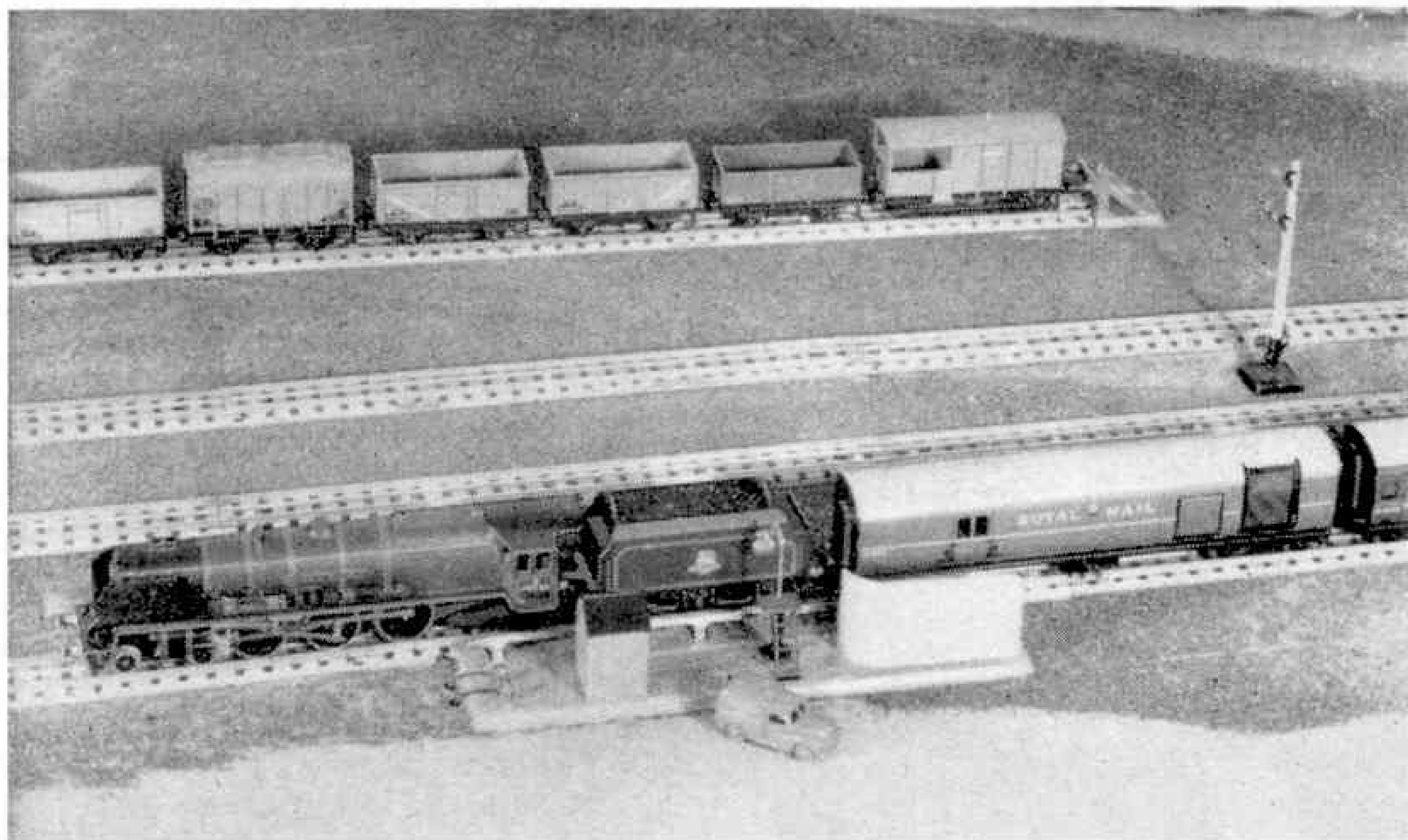
Fig. 3. The traveller that carries the load hoisting gear.

Fishplate held by bolt 19. It is then passed over the Sprocket 17 and to its free end a small Loaded Hook is attached by means of Cord.

The *Magic* Motor drive to the travelling wheels of the gantry is arranged as follows: The pulley of the *Magic* Motor is connected by a Driving Band to a 1½" Pulley 20 that is fixed on a 2½" Rod 21. This Rod is journalled in a 3½" × ½" Double Angle Strip 22 and in a 3½" Strip bolted to the 12½" Strips and 12½" Angle Girders respectively of the tower.

Care should be taken to see that the Driving Bands are not too tight, as this will cause excessive friction and so reduce the efficiency of the drive. A little oil on the working parts will also facilitate freedom of running and smoothness of operation.

Parts required to build the Hand Operated Hoist and Gantry:—4 of No. 1; 4 of No. 2; 1 of No. 3; 4 of No. 5; 4 of No. 6; 4 of No. 6a; 6 of No. 8; 4 of No. 9b; 4 of No. 9d; 4 of No. 12; 1 of No. 12c; 1 of No. 15a; 3 of No. 15b; 4 of No. 16; 1 of No. 16a; 1 of No. 16b; 8 of No. 20; 4 of No. 20b; 1 of No. 21; 1 of No. 22; 1 of No. 23a; 2 of No. 26; 1 of No. 27a; 1 of No. 32; 92 of No. 37a; 91 of No. 37b; 20 of No. 38; 6 of No. 48b; 2 of No. 53; 1 of No. 57c; 9 of No. 59; 1 of No. 94; 1 of No. 95; 1 of No. 96; 1 of No. 96a; 2 of No. 99; 1 of No. 111c; 1 of No. 125; 12 of No. 133a; 1 of No. 162; 2 of No. 186a; 1 *Magic* Clockwork Motor.



HORNBY RAILWAY COMPANY

By the Secretary

Little Things that Matter

OUR first picture this month concerns a matter about which several Hornby-Dublo owners have written to me recently. These enthusiasts have enquired as to the most effective site for the Lineside Apparatus that is an essential part of the T.P.O. Mail Van Set. The length of straight rail forming part of the Lineside Apparatus should be separated from any curved track by at least a Straight Half Rail. If you can have a longer length of straight, so much the better, because it will give the T.P.O. the opportunity of following a steady course and this helps to ensure smart and efficient exchange of Mail Bags.

Now, what about the position of the Lineside Apparatus on the railway itself? Should it be near to a Station? As a rule, but not always, the lineside apparatus in real practice is situated near stations, but it would not do to have it too close to the station platforms because of possible risk of injury to waiting passengers either from the mail pouches or from the T.P.O. net, or because of the presence of bridges and so on.

Fortunately in Hornby-Dublo we have

rather more latitude from this point of view. The "net" of the Hornby-Dublo T.P.O. Van is not extended until the vehicle is abreast of the Lineside Apparatus, and it closes immediately after the contact shoe at the side of the Van has left the contact rail. This snappy action means that we can afford to place the Lineside Apparatus fairly close to a Station platform if we have to, although the general appearance of things will be much better if we can place it several rail lengths away.

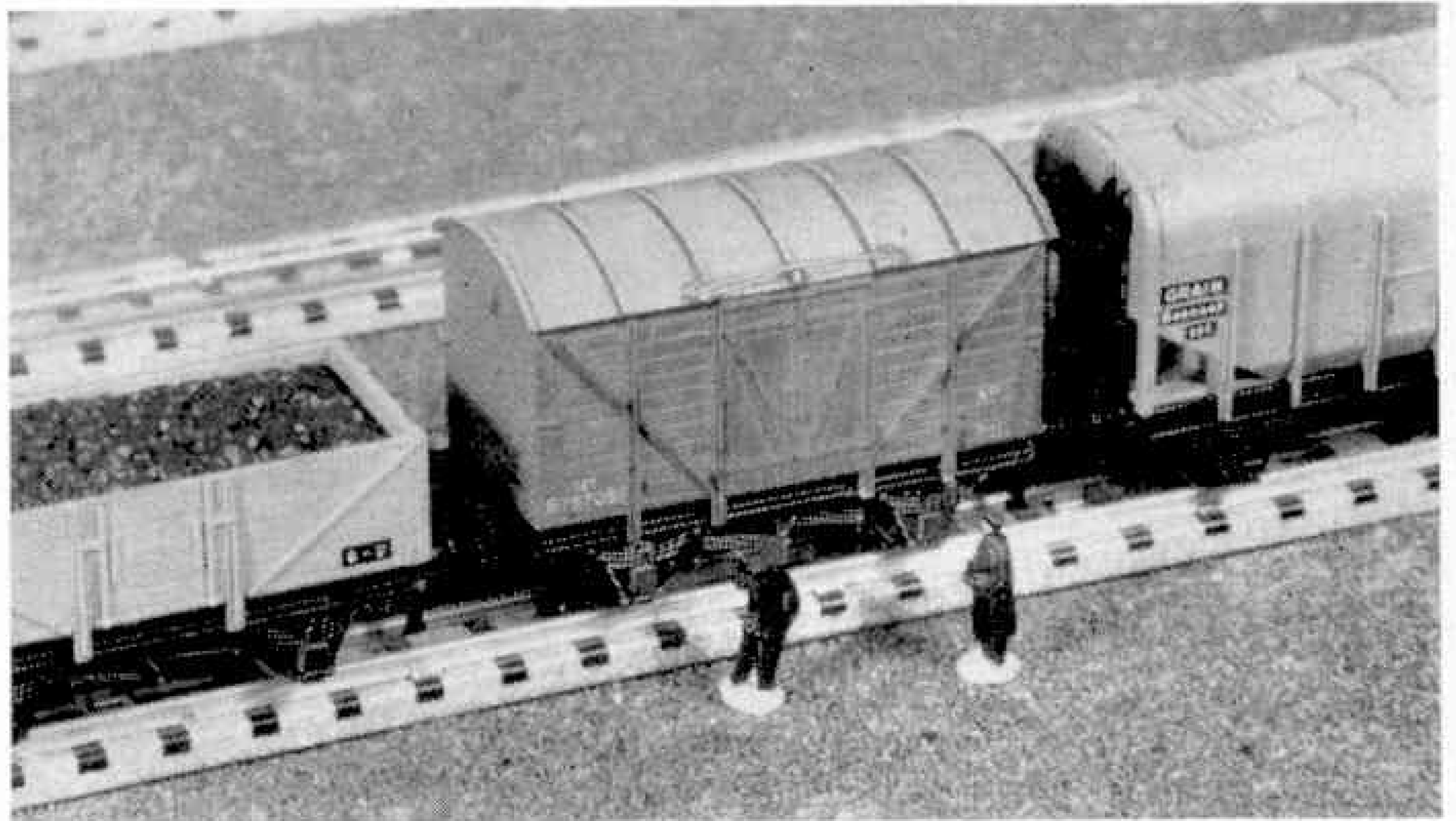
Don't forget, too, that it is desirable for the apparatus to be within reach of the operator, if he is

working single-handed. The Mail Bags have to be loaded on to the lineside standard for the train to collect them, or removed by hand from the receiving part of the apparatus when mail exchange has taken place.

A small point that has some bearing on the realism of things concerns the manner in which the real apparatus is reached by the postal official who has to be on the spot at the required time. Sometimes there is a well defined pathway along the railway

Above is a Hornby-Dublo mail train passing the lineside apparatus where a mail bag awaits collection. Dublo Dinky Toys No. 068 Royal Mail Van is standing by.

Two Hornby-Dublo railwaymen examine the freight train standing in the sidings at an intermediate stop.



from the nearest station for the postman, and if mail business is heavy he may require a hand-cart or truck to make the job a little easier. So we must agree that the postman who looks after the *Lineside*

Apparatus shown in the Hornby-Dublo picture here is fortunate. He can reach the mail exchange site by a road, admittedly a rather rough one, but it enables him to use his Dublo Dinky Toys No. 068 Royal Mail Van, which he can park right by the apparatus itself. In this respect he is a good deal better off than many of the men concerned with the job in real life.

Apart from mail exchange at the lineside apparatus here and there, a great deal of postal business is done at stations where mail trains stop, as many of you will know. You can therefore justify a fairly lengthy halt here and there in the course of journeys by T.P.O. trains in Hornby-Dublo.

This reference to stops reminds me of the stops that are made regularly by freight trains. Sometimes these are laid down in the working arrangements for the purpose

of changing engines or taking water and to allow the vehicles composing the train to be examined. Wheels, axleboxes, couplings, brake connections and undergear generally come under the examiner's careful scrutiny, while door fastenings, sheet ropes and the security of loads also are seen to. No doubt examinations, as many of you understand them, are far from your thoughts at present, but you should arrange to have train examinations, or at least stops supposedly for this purpose, to be included in your freight train working programme, even if engine changing is not carried out at the same time.

See that you have one or two miniature figures alongside the loop or track where your freight trains rest in the course of a journey. See how realistic the railwaymen look in our second picture. If you have one or two such people handy when your fast

freight pulls in, you will be delighted at the realistic scene that they help to produce. Just a little matter, but one that makes a lot of difference.



"Bristol Castle" heads its train along a scenic stretch on a Hornby-Dublo layout.

It Happens Sometimes!

HORNBY-DUBLO owners are always on the lookout for ways and means of adding interest to their train operations. For this reason we think that the pictures shown here will appeal to many Hornby-Dublo operators as they provide exceptions to what is generally accepted as normal practice, and exceptions—as we all know—prove the rule.

Ever since the introduction of the splendid Hornby-Dublo Diesel-Electric locomotive readers have often asked why this particular engine is not included in a Passenger Train Set and whether it would be in order to use the engine on passenger train duties. The answer is that the

scene reproduced here, showing the real D 8002 on a main line duty near Tring.

Now this is just the sort of thing that can be reproduced effectively in Hornby-Dublo, and the upper illustration on the next page shows a Hornby-Dublo L30 Diesel engaged on passenger work. No doubt some Hornby-Dublo owners use their Diesels in this manner as a regular thing, although strictly speaking such working should be confined to the period April-October, during which train heating is not called for. The real engines concerned have no steam heating boilers, and although the

Diesel-electric locomotive No. D 8002 on a passenger train near Tring. Photograph by J. A. Fleming.

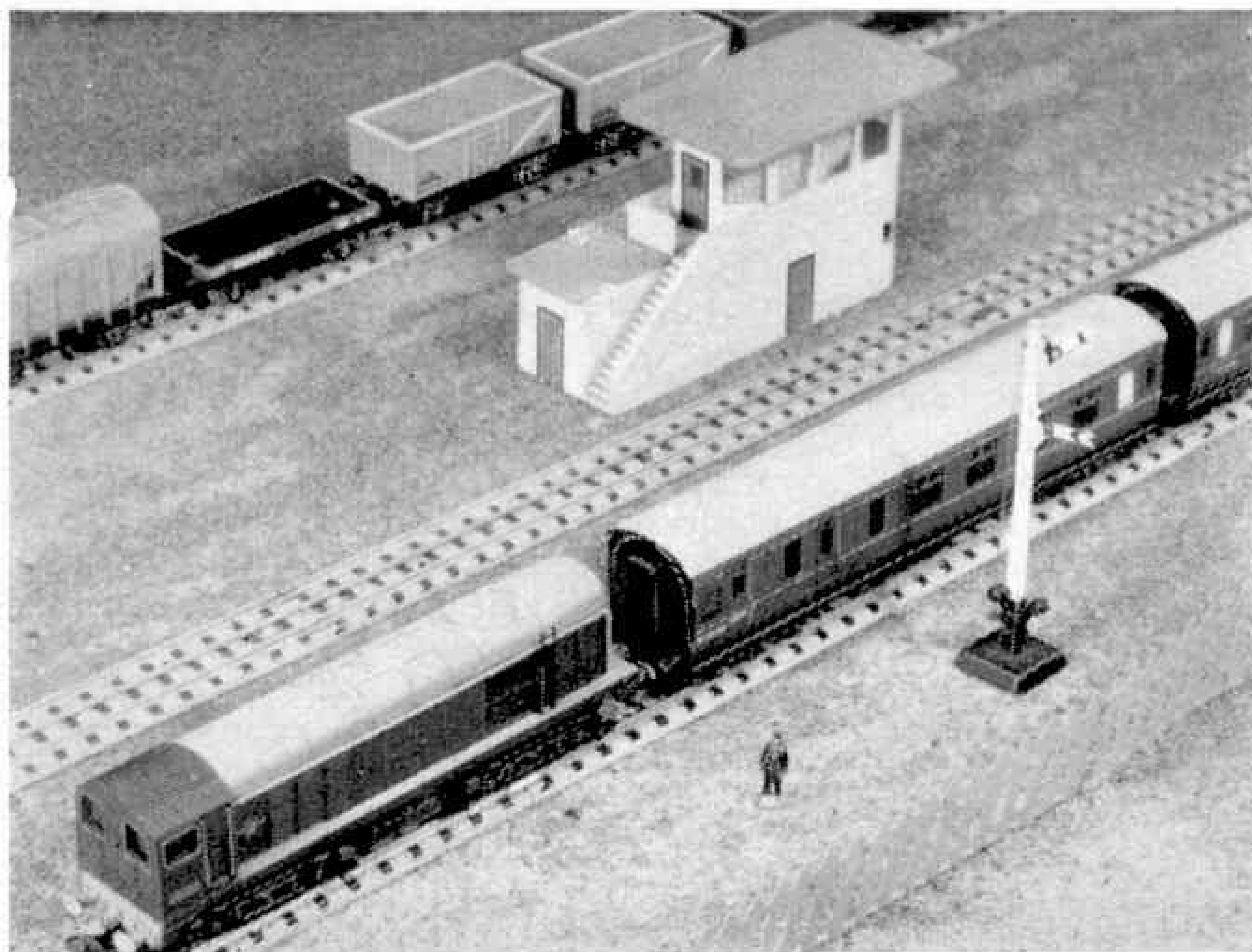


D 8000 diesels which the Hornby-Dublo L30 locomotive represents are for the most part employed on freight duties, for which they were primarily intended. So the Hornby-Dublo Diesel appears in a Goods Train Set, and very many enthusiasts make good use of their L30 Diesel on freight trains of all kinds, including some of the more important express ones.

But during the summer season it is sometimes possible to see diesel locomotives of this class hauling passenger trains, and there have also been one or two instances of excursions being worked by them. Fortunately our contributor, Mr. J. A. Fleming, several of whose photographs recording operations of special interest have appeared in these pages, was on the spot on one occasion last summer to capture the

question of heating Hornby-Dublo Trains does not arise, it is always nice to know that one is following correct practice.

During operating spells enjoyed on Hornby-Dublo layouts at present no doubt summer traffic will be in full swing, with special workings, additional trains, and so on. Perhaps some of these may well be Diesel-hauled excursions, but the steam type express locomotives on any Hornby-Dublo layout are liable to be kept pretty busy too, so much so that the sort of thing shown in the lower picture on the opposite page may easily be necessary. This shows the well-known and popular Hornby-Dublo 2-8-0 Freight Locomotive on passenger duty, no doubt owing to the press



A Hornby-Dublo Diesel Locomotive makes a run on passenger stock, no doubt on a special occasion.

miscellaneous traffic in containers only. The Hornby-Dublo owner can readily arrange a train of this kind using the familiar Low-Sided Wagon with whichever of the two types of Container that are available in the range meets his requirements best. For general traffic the Furniture Container would be the better one to employ, and a train of these carried on the appropriate Low-Sided Wagons

of holiday traffic. The appearance of an unusual locomotive on a train always arouses comment, and here is an opportunity to set your Hornby-Dublo passengers talking. You will remember that in one of our July illustrations the same sort of thing was shown on a reader's layout. Correspondence shows that the Hornby-Dublo 2-8-0, although primarily a freight engine, is used extensively for mixed traffic duties on many layouts.

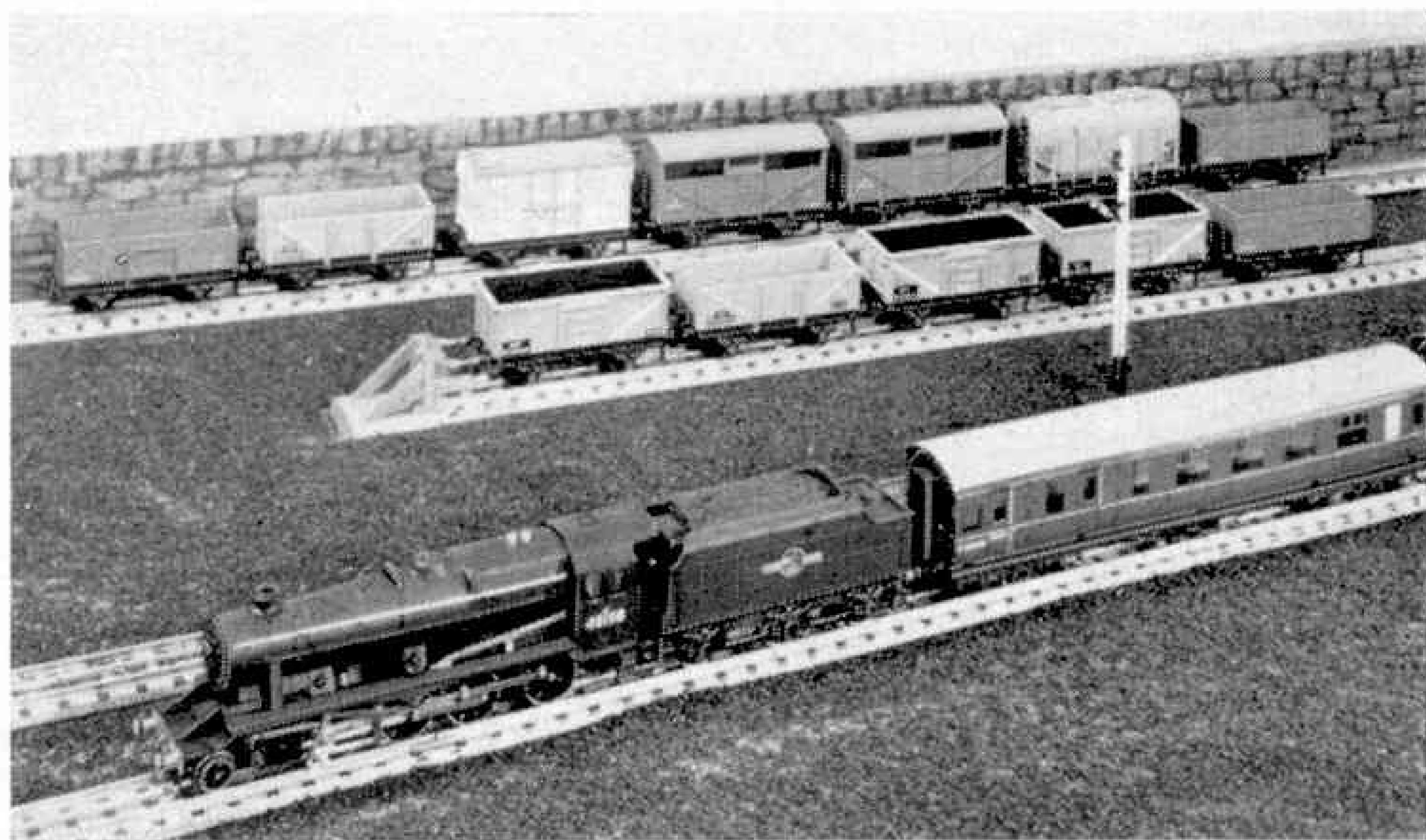
Reference to such duties suggests a type of diesel hauled service that can be provided on Hornby-Dublo layouts that is in keeping with recent B.R. developments. For some months now there has been in operation the special *Condor* express container service between Glasgow and London over Scottish and London Midland Region routes, for

would make quite an interesting sight.

The Wagons used should be in the bauxite finish that distinguishes vacuum brake fitted stock in actual practice, because the *Condor* train is of course vacuum braked throughout. To complete the train the Hornby-Dublo B.R. Standard Goods Brake Van should be used as this represents a brake-fitted prototype. This is just the sort of job that the Hornby-Dublo Diesel Locomotive can undertake, although the real *Condor* is hauled by diesels of a different type.

In addition to such a specialised service other container trains can be run, perhaps hauled by a passenger engine.

A Hornby-Dublo 8F 2-8-0 Locomotive lends a hand with the passenger train working during the rush of holiday traffic.



In-and-Out Railways

By "Layout Man"

A SPECIAL advantage of a Hornby-Dublo layout arranged on a baseboard, as is usual nowadays, is that it can generally be moved fairly easily. What I have in mind particularly is the use of a baseboard layout either indoors or outdoors as required, which is specially convenient at this time of the year and makes possible such a scene as that shown in the picture on this page.

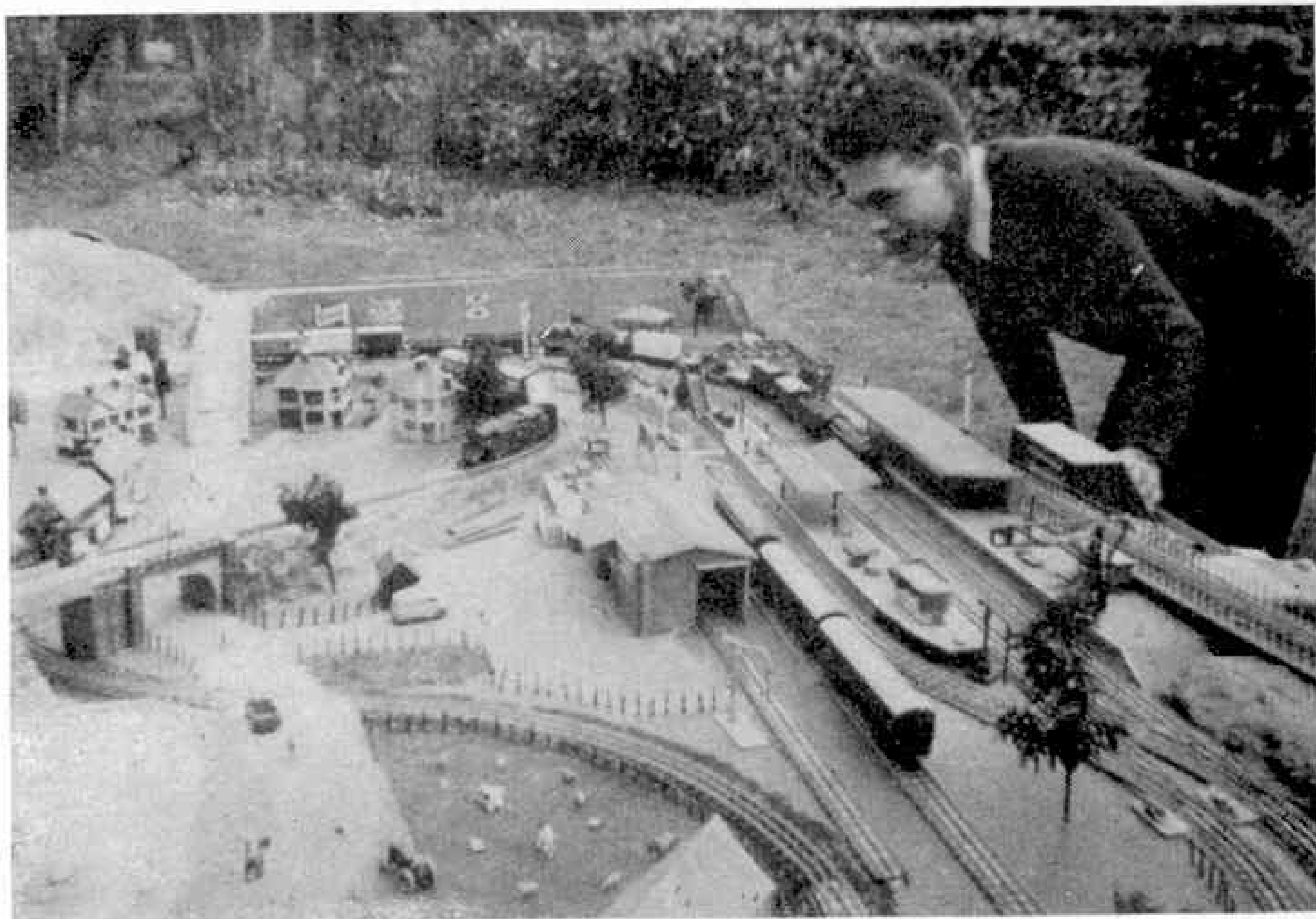
In this it is clear that our reader Graham Vickers Todd is thoroughly enjoying himself in the garden with his railway, which altogether occupies a space of 8 ft. by 5 ft. This has been developed gradually and in its present state it includes a double track main line serving the station that you can see in front of the enthusiastic owner. The island platform, that is readily visible, is also served by a loop line, while there is in addition an S-shaped "reverse loop" at baseboard level curving across the centre of the system in the foreground.

Further operating possibilities are offered by the inclusion of a gradient section. This has a single track branching out from the main line to which it runs parallel for some distance and then finally crosses at a higher level, before descending diagonally across the board. It too reverses its direction and joins the inner main track at baseboard level near the road bridge at the far end of the layout.

A special feature of this layout is that the provision of loops and crossovers makes

for extreme flexibility in operation. Trains can be moved freely in either direction and the fullest use is made of the two reversing loops in varying the running programme. As is evident from the photograph, a considerable amount of attention has been given to the lineside effects. On the side opposite to the operator there is a built-up range of hills and through these at one corner of the layout the double track main line makes its way in a tunnel.

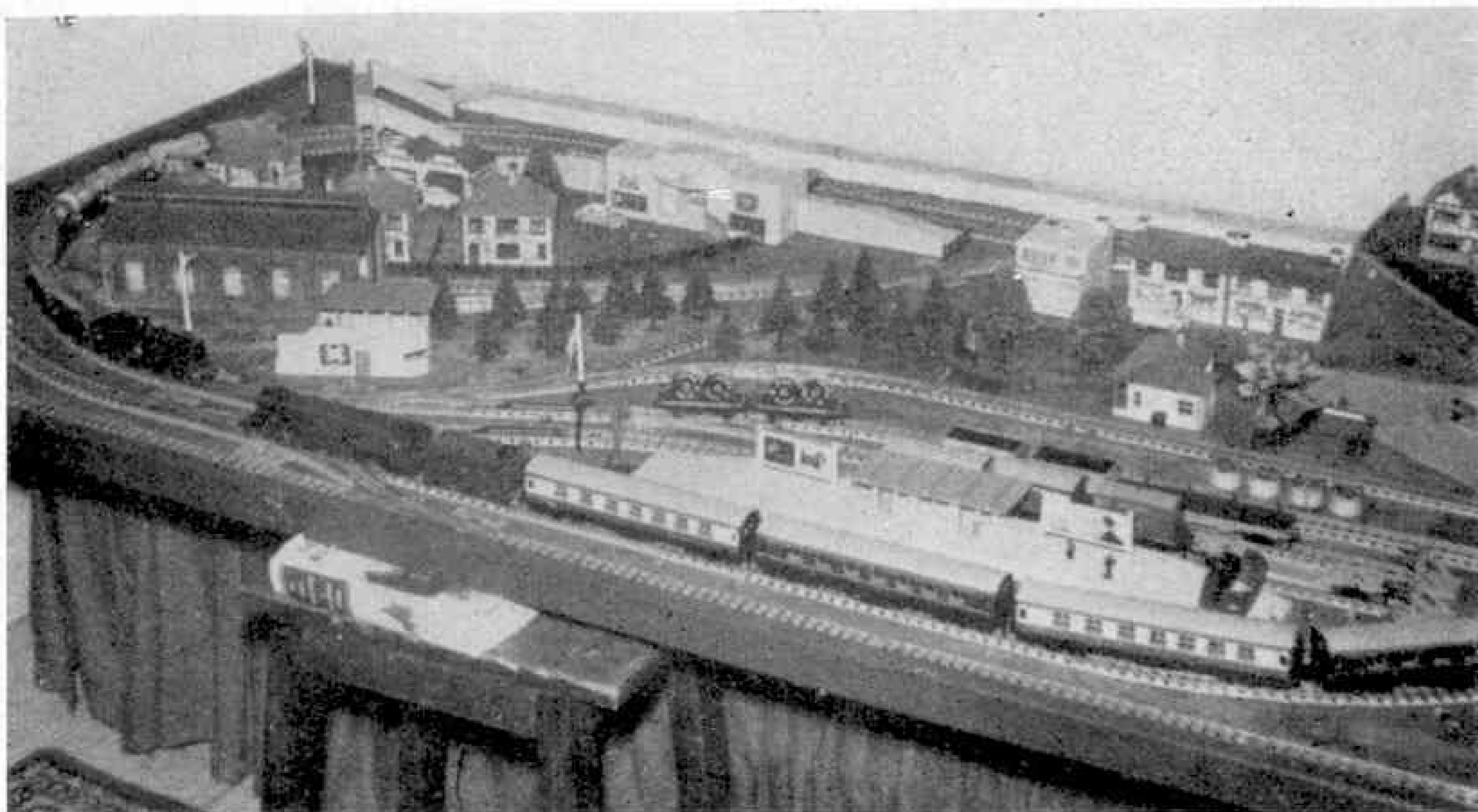
Buildings of various kinds are provided and a point is that there are not too many



Graham Vickers Todd watches the progress of the trains on his Hornby-Dublo baseboard layout, here shown in operation in the garden.

of these, so that there is sufficient space left for the roadway that makes its way from end to end of the system, and for the patch of farmland that is prominent in the illustration. A point to note is that buildings grouped near the road bridge are not all arranged at baseboard level, which is an important point adding greatly to the realism of the system as a whole.

Although the railway shown in our next illustration is situated indoors, it is exactly the type of system that lends itself readily to moving outside when weather conditions and so on make this possible. It belongs



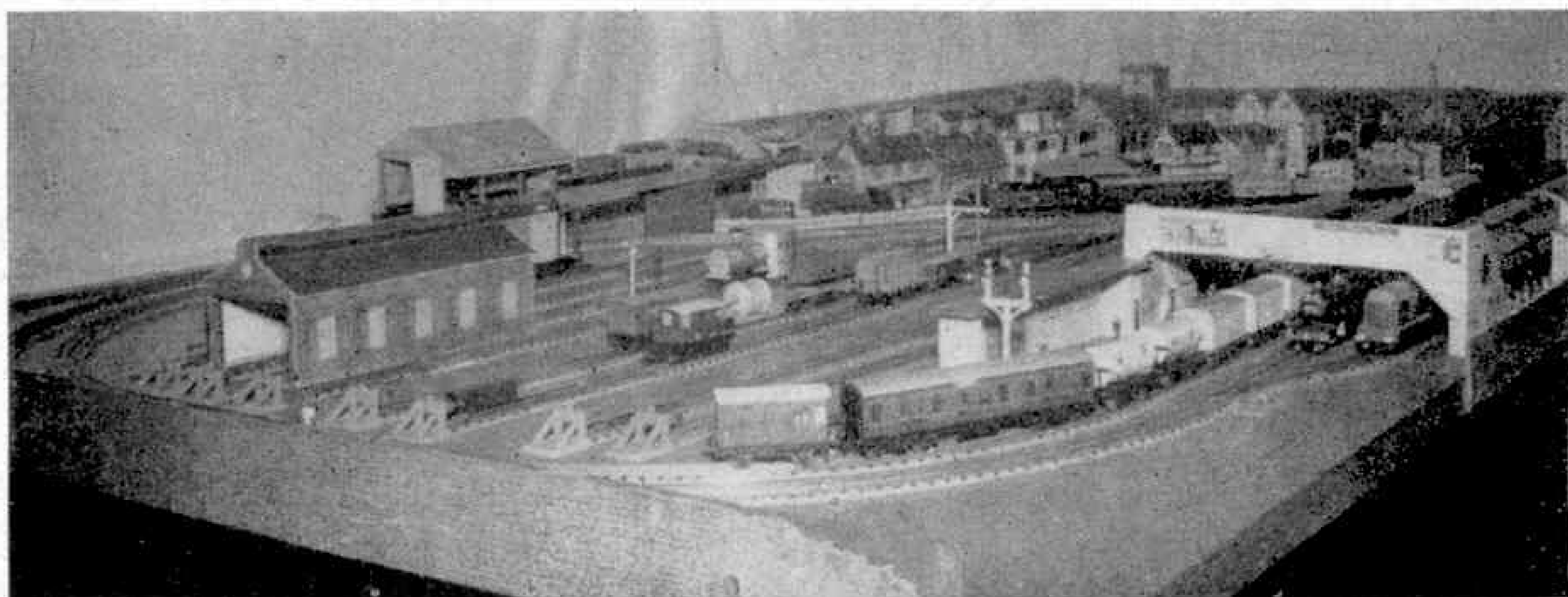
This Hornby-Dublo railway belonging to Ian M. Beatson is one that could be taken out-of-doors.

to Hornby - Dublo enthusiast Ian M. Beatson, who has developed a neat and tidy system that is normally used in the situation shown. Our friend has evidently been at great pains to ensure that the board is supported at correct level. No doubt the book was just the right thickness!

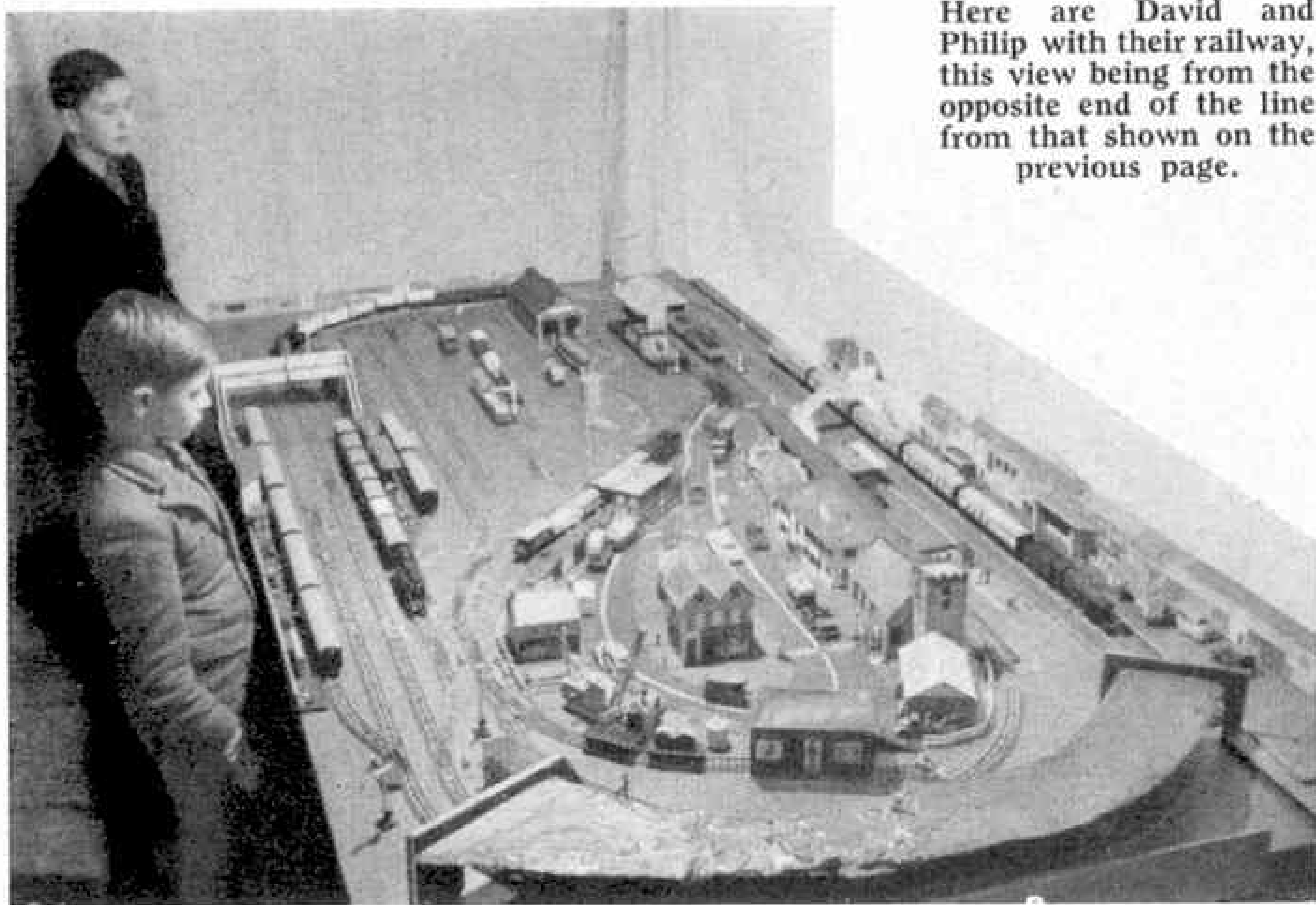
Although it is an all-level layout so far as the railway is concerned, the general effect is by no means "flat" because there is a built-up section, towards the upper right-hand corner of our illustration, through which the railway tunnels, and on the raised ground thus formed buildings are disposed in a realistic manner. I think that the absence of an uninteresting flatness on the system elsewhere is due to the careful disposition not only of the tracks, but also of the buildings, both railway and otherwise, and a helpful belt of trees.

The layout shown in two of the remaining illustrations can be described perhaps as an "inside-outside" railway because it is situated under cover, not in the house but in the garage. This is jointly owned by the brothers David and Philip Harding, who appear in the picture overleaf. In its formation they have had the advantage of the interest and experience of their father, Mr. E. M. Harding, who has written to me about the railway as follows:

"The layout is on a board 9 ft. by 4 ft. 3 in. and is installed in the garage of our house. Along one wall I have fitted a length of 4 in. by 2 in. timber which is spaced off the wall about 6 in. by iron brackets. The railway board is hinged to this, with three legs fitted to the outermost side. We raise the board up when I want to drive the car in. To play trains, I drive



One end of the garage railway of David and Philip Harding, showing the neat arrangement of sidings and buffer stops.



Here are David and Philip with their railway, this view being from the opposite end of the line from that shown on the previous page.

wired to the single terminal at the back of a G3 Switch. The terminal on the section side of the Isolating Rail is wired to the upper of the two terminals at the front of the Switch. The lower terminal is wired to the indicator lamp, which in turn is connected to an independent supply source. The other side of the supply is taken to the single terminal on the Switch. With this

the car out and lower the board. All of the track, stations and buildings, even the people, are firmly attached to the board, and the only movable items are the Dinky Toys and the railway rolling stock and engines.

"You will observe that in the one photograph, a milk train is being run. These milk tanks are the ordinary Tank Wagons that we have painted white and transferred with the letters *U.D.* The passenger brake van started as an ordinary suburban carriage, but we have stuck lithographed papers on to the sides thus making it a passenger brake van.

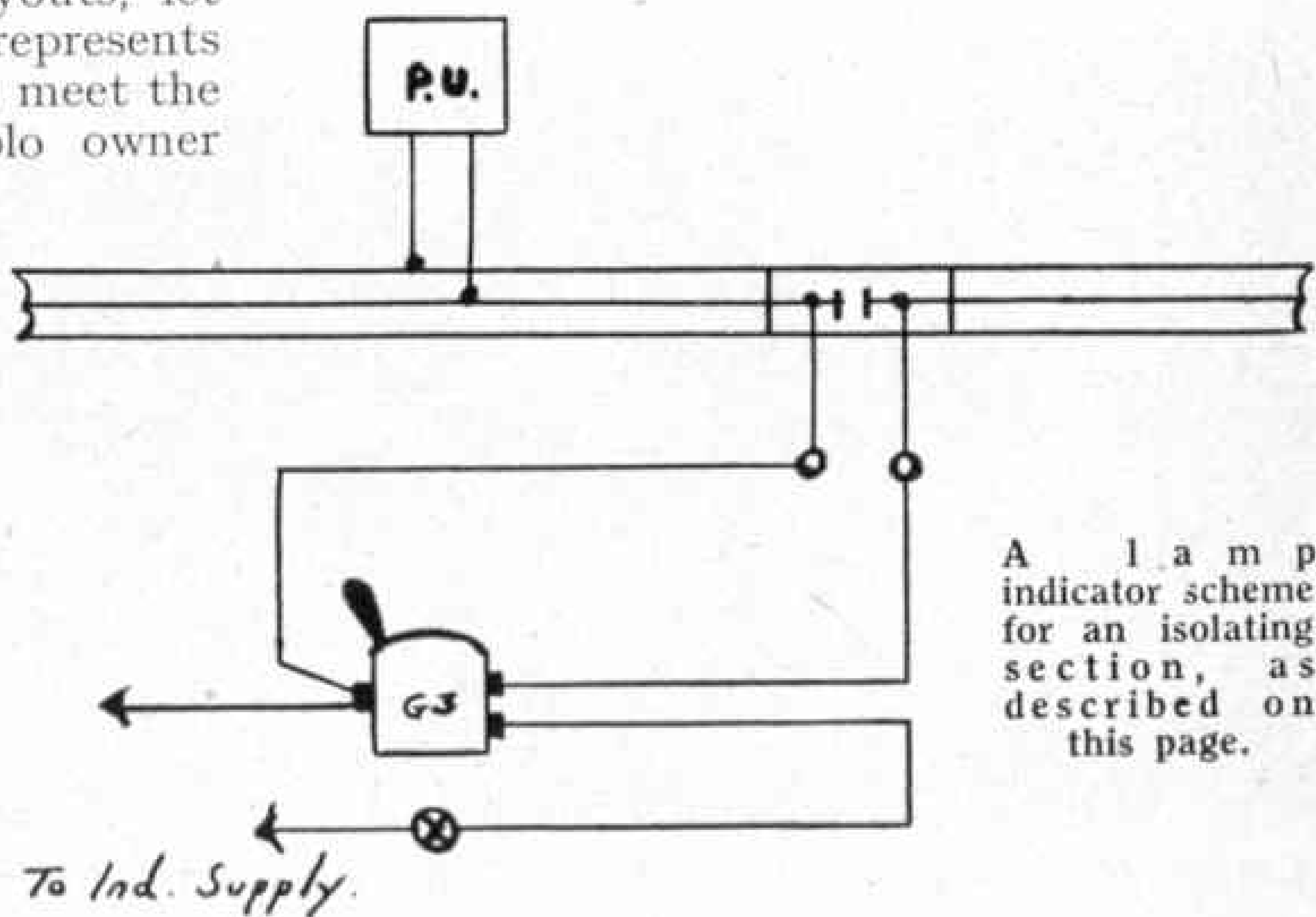
"The tunnel is made from fibre glass and resin and is open all along one end of the board, thus making it easy to deal with any derailments that may sometimes occur."

Finally, as a change from layouts, let us look at the diagram below. It represents a scheme that was worked out to meet the requirements of a Hornby-Dublo owner who wanted a lamp bulb to light up to indicate a particular isolating section being made "dead". In the diagram the position of the Isolating Rail is shown by the gap in the centre rail and to the right of this is a dead-end siding, but the scheme could be applied just as well to an isolating section in a loop.

Connections are made as shown in the diagram, the terminal on the supply side of the Isolating Rail being

arrangement the G3 Switch is used as an isolating switch, and in addition it controls the current passing to the lamp so that when the section is "dead" the lamp is illuminated, and vice versa.

The supply used for the lamp must be separate from that used for train running, and its voltage can be different from that used for the track. A 4.5 volt battery could be used, with a flashlamp bulb, but if a supply is taken from the accessory terminals of a power unit, then a 15 to 20 volt lamp will be required. This is a useful little refinement that some of you might like to apply to the isolating sections of your own layouts. Any number of G3 Switches may be used in this way, provided the supply source is capable of supplying the total current required by the lamps.





Club and Branch News



WITH THE SECRETARY

ON JOINT EXHIBITIONS

The report from the Consett Y.M.C.A. M.C. summarised on this page in the June *M.M.*, mentioned the *Leisure Hours Hobbies* Exhibition organised by that Y.M.C.A., and in which the Club played an important part. The event was notable for the wide range of hobbies represented, which had been achieved by inviting other clubs in the area to participate. In his detailed report to me, David F. Trout, the Club Secretary, commented that the Exhibition "was a huge success and helped to bring the various clubs of the area together". In doing so, it provided the members with opportunities of learning about other people's hobbies and of telling them about their own.

I have recommended joint enterprises of this kind to Clubs and Branches before, and I do so again. They promote immense goodwill and are wonderful publicity.

PROPOSED H.R.C. BRANCH

Members living in the Hayling Island district of Hampshire will be interested to hear that efforts are being made to form a Branch of the Hornby Railway Company there. The age limit is 13. Readers who are interested should write to Mr. W. Scaife, "Martessa", 15 Mengham Lane, Hayling Island, Hants., and enclose a stamped addressed envelope for reply.

CLUB NOTES

NEWTOWN SCHOOL (WATERFORD) M.C.—The Whitsuntide exhibition was very successful, with a fine and varied display of models. A member of the school who does not belong to the Club very kindly lent his Hornby-Dublo trains, and these were a great attraction. There was also an impressive array of Dinky Toys which had been brought by the members. A $\frac{1}{4}$ h.p. 220v. A.C. motor and other accessories have been added to the Club equipment, and a donation of 10/- received from the school's Old Scholars Association. *Secretary:* J. Gillespie, Newtown School, Waterford, Eire.

AUSTRALIA

MAYLANDS M.C.—The annual Presentation Night was held in Maylands Town Hall, when the awards were presented by Mr. G. Whinnett. Afterwards Warren Bransby, who has been consistently decorated, pinned a life membership medallion on Mr. Whinnett's coat, in recognition of his ten years' service as secretary of the Parents' Committee. David Jones (Perth) Ltd., one of Perth's leading departmental stores, invited the Club to put on

a display of working models there during the last two weeks in May. The display aroused a great deal of public interest, and the firm donated £10 to the Club in recognition of their services. *Secretary:* T. Down, 16 Kennedy Street, Maylands, Western Australia.

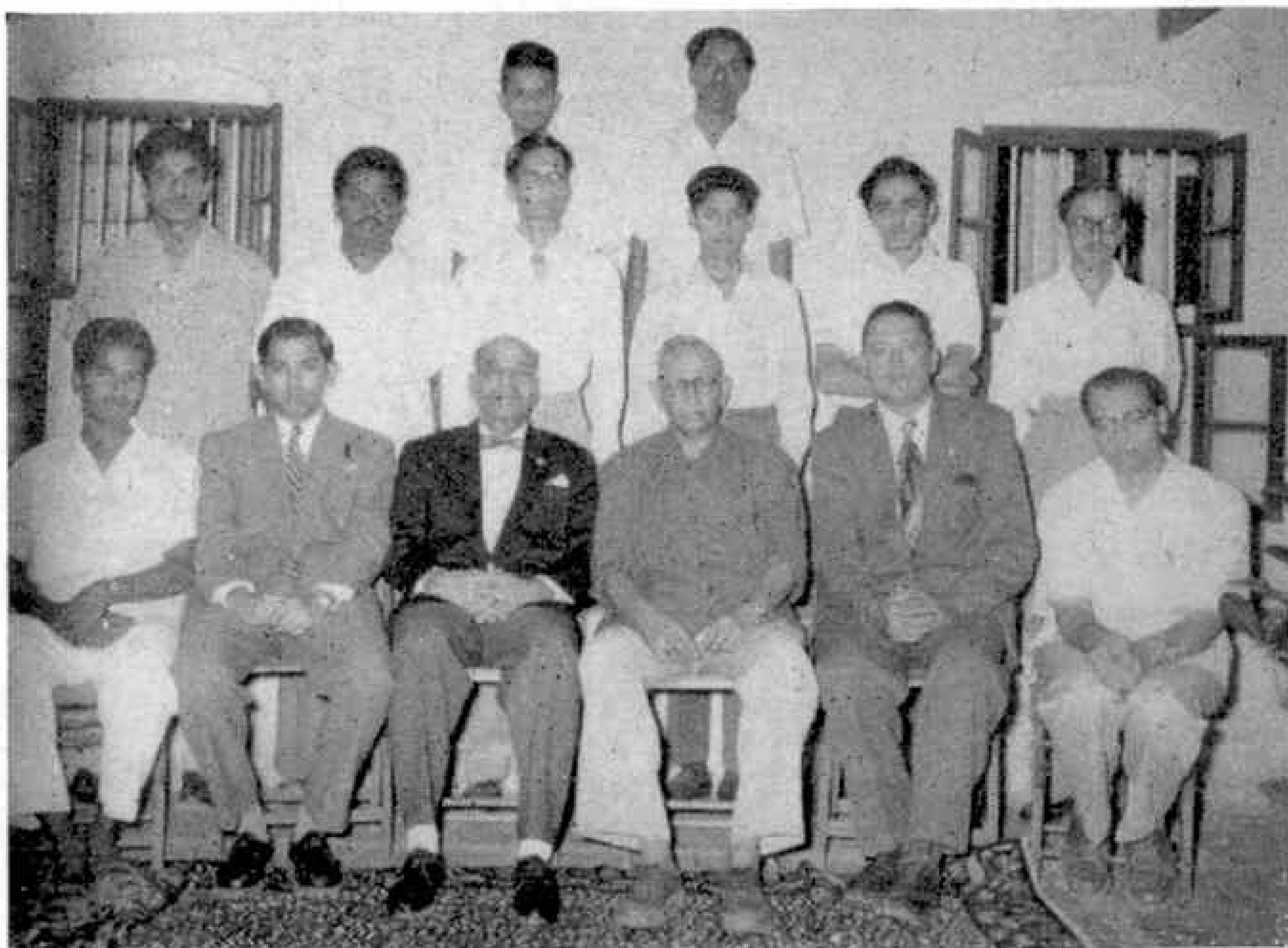
NEW ZEALAND

CHRISTCHURCH M.C.—Several meetings have been devoted to displays of home-built models brought by members, sometimes of a pre-arranged subject and on other occasions of subjects of their own choice. The Club had a models display at the Addington School Fair, with considerable success, and at the time of writing are busy preparing for the Club display at this year's New Zealand Industries Fair. *Secretary:* R. Boundy, 35 N'Bratneys Road, Sallington, Christchurch, New Zealand.

BRANCH NEWS

AVIARY MODEL RAILWAY CLUB.—Track meetings are still run on the two-group plan, the members present dividing into two teams one of which holds a quiz while the other operates the Branch layout. The two teams change over half way through the evening. Model-building meetings have been devoted to the construction of models for the further development of the layout, and recent work completed includes a children's playground, with a pond, trees and fences. A new transformer has been bought out of Branch funds. *Secretary:* J. Baker, 10 Salisbury Terrace, Leeds 12.

KIDDERMINSTER MODEL RAILWAY CLUB.—Cycle runs are a popular summer activity, and are under the captaincy of J. Hill. The laying down of the track for the new Branch layout is making good progress. *Secretary:* E. J. Ward, 27 Whittall Drive, Kidderminster.



Some of the officials and members of the Mysore M.C., India, Mr. S. K. Basavaraj Urs, President, is third from the right in the front row, and Mr. M. N. Radhakrishna, Secretary, is second from the left in that row. Between them is Mr. B. Madhava Shenio, Vice-President. The Mysore M.C., now in its seventh year as an affiliated Meccano Club, has made excellent progress. Photograph by Mr. B. S. S. Shankar.

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For other Stamp Advertisements see also pages 418 and xxii

Stamp Collectors' Corner

By F. E. Metcalfe

NIGERIA

When recently I dealt with an interesting Nigerian slogan postal cancellation, I told you that shortly I would try to deal in general with the stamps of that West African country. One reason for this was that next year Nigeria will be granted its full freedom. As that will mean philatelic changes, now is a good time to consider the present stamps and their prospects.

The philatelic history of the territory that constitutes Nigeria today goes back to the last century, and a collector who wished to do things in style would have plenty to do to cover it, for he would have to take into account stamps issued by Lagos and the Niger Coast Protectorate, separate issues for Southern and Northern Nigeria, and finally stamps of Nigeria itself. A full pocket would be needed too to cope with all the stamps concerned; but the result would be very satisfying to a real philatelist.

Although few of us are likely to want to collect so copiously, some might like to start with Northern Nigeria, which first issued stamps in 1900, Southern Nigeria following suit a year afterwards. The stamps of both these sections of the country are quite straightforward, but I am afraid that complete collections would be quite beyond the means of most of us. For instance, there are several 10/- and £1 stamps. One of these is catalogued at over £20, and some at half that figure. This does not necessarily mean that you need pay so much for the stamps, but they would still be costly.

Moreover, all the stamps are of small size, with head portraits of the rulers of the time. In fact, so far as the designs are concerned, they are as dull as ditch-water, particularly to those who know and like the

pictorials of today. So suppose we start at the time when Nigeria formed itself into one political entity, and in 1914 issued its first set for the whole country. We will have to put up with the small head type designs until 1936, for the 1914 issue consisted of stamps from ½d. to £1, all of them just bearing the portrait of King George V; and here I am rather at a loss to know what to say about the 3d., 4d., 1/-, 5/- and 10/- values of this first KGV issue.

I remember at the time what excitement the issue of various printings caused, for several kinds of paper were used. The stamps I have mentioned were all printed on coloured paper, but in some cases the backs were white, and the fronts differed in various shades of the respective colours. Now these variations are still

treasured by philatelists, though much of that excitement to which I have referred has long since evaporated.

Let me put it like this. Just take a note of the denominations concerned, and keep a sharp eye open for any variations. If any come your way—fine; if they don't, well, just go on as though they never existed.

There was a watermark change in 1921, and Nigerian stamps now bore the Mult. Script watermark. All collectors of Commonwealth stamps will know all about this watermark, for its use became general. Also we got the two dies, but I am not going to go into this, for if there are any who wish to take account of these, they will find full details in Gibbons Part I catalogue.

The first commemorative issue appeared in 1935, with the usual four stamps for the Silver Jubilee of King George V, and then in 1936 we got the first pictorial issue. A mint set is expensive, but a used set to, say, a shilling face will be cheap enough.

And here let me indicate two stamps to look out for. I refer to the 1½d. and 3d. values, perforated $12\frac{1}{2} \times 13\frac{1}{2}$, as against the usual $11\frac{1}{2} \times 13$. They are not hard to distinguish, even without a perforation gauge, as the difference is substantial, yet they escaped notice for quite a time. I remember well the bit of luck that I had. A friend told me of the existence of these stamps in what he called a good perf. and on looking at my single mint copy of the 3d. I found I had the winner! So I sold it promptly for a fiver, and bought one of the common perf. for 6d. The latter is still in my album.

There were no other perforation varieties in this 1936 issue, but when we got the first KGV set, in 1938, perforation changes came out thick and heavy, particularly for the 2/6d. and 5/- values. The first of these two stamps is the best. You would be lucky to get one of each value mint under £2, but used copies are cheaper, and anyhow one of all values used, from the ½d. to the 5/-, ignoring the perforation, should be obtainable for not more than a few shillings.

We had the usual commemorative sets, the "Victory", Royal Silver Wedding and U.P.U. issues, and then in 1953 came the first "QE" definitive set, which is still current. The designs of this issue are quite unusual. They were the work of M. Fievet, a Frenchman, and they look

it. There is a very interesting feature about this issue, one on which I am actually working at present. First of all the stamps were printed in

England by the flat-bed recess process. Later the 1d., 2d. and 3d. values were printed in Belgium at the branch works of the British firm, by rotary recess. Now the 2d. value has caused a lot of fun, first because each printing has varied a good deal in colour, and second because the story was first given out that the original differences were due to the effect of the Nigerian climate.

Well, that's Nigeria to date. At the moment a most sedate philatelic country, but just wait until next year! Then I am sure we will see some fun, and a nice little collection formed during the present lull may be well worth having when Nigeria comes into the limelight.



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Stamp Gossip

THE LOW COUNTRIES

The Netherlands is one of the most wonderful countries in the world, in the sense that the skilful Dutch have had literally to rob the sea. While the



latter has hit back time and again, in the long run our friends and near neighbours have won out.

From the Dutch Post Office I have received a brochure giving details not only of the Summer Stamps issue, but also

describing how that tight little country is fighting its enemy the sea. I wish you could all get copies of this publication. But, at any rate, you can buy a set of the stamps, which consists of five values, each with a design associated with the battle against the North Sea.

JAPAN

One set of stamps issued on 10th April last would perhaps please lady collectors. I refer to the set of four stamps released by Japan to commemorate the wedding between Crown Prince Akihito and his bride, hitherto a commoner, who was thereby made a princess. Two of the designs depict a fan—I am afraid that I do not know the significance—and the other pair carry delightful portraits of the prince and the now princess.

POSTAL REPLY COUPONS

When sending a letter abroad for which they would like a reply, collectors often worry about a stamp for return postage, since they cannot send one of their own country's stamps. But they can go to the post office and get a reply coupon, for which the recipient can get a stamp in exchange at his own local office.

The cost of the coupons has recently gone up, and one for use within the British Commonwealth now costs 5d., against the old rate of 3d. For countries outside the Commonwealth one now costs 1/-, whereas the previous charge was 9d.

COINS

I have often felt like collecting coins, for unlike postage stamps, which relatively are mere parvenus, they go back for centuries. It must be fun to possess a collection of genuine items belonging to the distant past. Well, if we cannot have real coins, what about stamps depicting them? They make quite a large collection in all, and where would we find a finer set on these lines than the one issued recently by Greece?

One of this set of ten is illustrated. No



wonder it is proving a best seller. A full set costs a few shillings, but recently in a stamp dealer's window I saw a short set of three which was only priced at 6d., so that trio at least is within the financial reach of all of us.

OIL, MIGHTY OIL

Without a doubt much of the trouble that keeps politicians awake at night comes from oil. The Middle East, once the most somnolent of regions, is now the part of the world where most is happening, and the reason—oil!

Our newspapers were full of accounts of a most important conference held in April in Cairo; and the reason for the conference—again oil. A rather attractive stamp, illustrated here, was issued by the hosts of

of that get-together to commemorate the event. Egypt does not allow her name on her stamps in these days, for she is supposed to be just a part of the United Arab Republic. It certainly needed a skilful artist to make anything of a line of oil pipes and a derrick.



THE ST. LAWRENCE SEAWAY

Canada has been quite a bit in the philatelic news lately, for on 18th June this sister nation issued a stamp to commemorate the visit of the Queen and Prince Philip. While this stamp is quite a handsome affair, many will regret that the portrait of the Prince did not also appear on it, as was the case when the Royal Visit of 1957 was made.

A still more interesting stamp was issued on 26th June to commemorate the official opening of the St. Lawrence Seaway. The United States also issued a stamp to mark the same event. The design was a joint affair, with five Canadian and U.S. artists having fingers in the pie, which may account for a not very outstanding work of art—probably a case of too many cooks spoiling the broth.

THE TIP OF THE MONTH

For quite a long time, the need to know the quantities sold of British Commonwealth stamps when they went obsolete was urgent, if we were to get a reliable idea of their scarcity. Most countries outside the Commonwealth, as well as the large countries like Australia, etc., have supplied such data for a long time. So I set to work, and with the help of a friendly M.P., got the Crown Agents to supply this information, first for special stamps and later for the ordinary issues also.

Among the figures given in their second list, in May, were those for the three obsolete "QE" Dominica stamps, which were changed for new designs on 15th October, 1957. I have always felt that the three stamps, 3c, 5c, and 48c values, were quite good, particularly

the highest value, but it was still a shock to find that this latter had sold only to the tune of 49,540, which means that there are hardly likely to be more than about 32,000 copies mint. A scarce stamp indeed, and if you can get a copy at not much above say 4/-, do not hesitate to buy.



Lost Railway!—(Continued from page 394)

Until the system was taken over by the London and North Eastern Railway in 1936, it had more of a Midland atmosphere than ever before and even under the final régime it clung tenaciously to some of its old characteristic ways. Even when British Railways ordained that its carriages should be renumbered in an "80000" series, Melton found some old gilded transfers and duly placed "M & GN" in front of or above the absurd new numbers, making it look as if the Joint had more coaching stock than anybody else on earth!

What ultimately sealed the fate of our very English Joint line was, ironically enough, its possession of three impressive bridges spanning wide tidal rivers. Never very substantial, they could not carry the loads of today and the current cost of renewal was prohibitive. The first to close was that over Breydon Water, in 1953. This was a swing-bridge, much longer than the one spanning the Nene at Sutton Bridge; the third was a lengthy timber viaduct across the South Ouse outside King's Lynn. With these closed, the line ceased to be a direct link between the Midlands and the East Coast, and on most sections allowed to remain only light freight traffic will be continued.

In one of the placid Fenland dykes near Bourne, it is almost customary to see a solitary and dignified heron standing like a statue. He used to take wing at the approach of the daily Yarmouth to Birmingham express, with its eight fine L.M.S. carriages and ex-G.E.R. Buffet Car. But since February ended there is nothing more disturbing than the very occasional passing of a small green-hued Diesel Shunter ambling along with a handful of trucks.

It might make the heron wonder even more could he decipher the wording on the Diesel's works plate. It is SWINDON, 1958!

Dinky Toys News—(Continued from page 400)

replaced by a special pack containing a Napier rocket motor and fuel system. When using the power of both the turbojets and the rocket motor, the aircraft is expected to be able to climb up to jet-bomber cruising heights in some two minutes and to have a top speed of about 1,500 m.p.h.

The new Dinky Toys model of the P.1B Lightning has a black plastic nose-probe and is finished in silver. It bears R.A.F. roundels on the upper surface of the wings and on the sides of the cockpit and the red, white and blue motif on the tail fin.

"BRITISH RAILWAYS TODAY AND TOMORROW"

By G. FREEMAN ALLEN

(Ian Allan Ltd., 25/-)

This is not intended as a book for the railway beginner. It will rather appeal very strongly to the enthusiast who already knows something of the elements of railway practice, equipment and operation. It lives up to its title in avoiding history as such, although references to the past are necessarily included here and there. A feature of particular value is that it makes quite clear what changes are involved in the British Railways Modernisation Plan launched in 1955, and that these will succeed one another more and more rapidly as the programme advances.

There are ten chapters, making up the total of nearly 200 pages of text, giving a broad survey of each of the types of motive power now in use, steam, diesel and electric, and looking into a future in which large-scale main-line electrification is envisaged. The working of both passenger and freight trains, and the organisation of traffic under control bring the reader into touch with train movement, while the organisation and maintenance of motive power, signalling and track equipment in this changing age of railways also have attention.

Needless to say the book is well illustrated and, as befits a copious work of this kind, an index for ready reference is a valuable feature. Those who wish to look into the railway age ahead, and who require an up-to-date survey of current development, will do well to add it to their book list.

"GREAT EASTERN"

By CECIL J. ALLEN

(Ian Allan, 2/6d)

This is a pocket-sized, but comprehensive survey of the Great Eastern Line, an important and virtually self-contained unit of the Eastern Region of British Railways. Its title is a revival of the name of the former Company that became part of the L.N.E.R. group formed in 1923. The author himself was a Great Eastern man, well acquainted with things from the inside in both G.E.R. and L.N.E.R. periods, and so is well qualified to record events well past, while he has obviously kept a close watch on subsequent developments. In the latter the Great Eastern line has regained its individual character under B.R. policy and has witnessed something of a revolution in its organised train services.

East Anglian train services, motive power and signalling developments are the subjects of interesting chapters, while the current speedy systematic services afforded by taking the fullest advantage of modern motive power are dealt with. In the use of diesel traction, in the provision of modernised freight and marshalling yards, and in the use of electrification on the 25 kW system standardised by B.R., the Great Eastern has shown much progress.

There are plenty of good illustrations throughout and the up-to-date facts and figures relating to their favourite line will delight supporters of the Great Eastern.

"LOOKING AT BUTTERFLIES"

By L. HUGH NEWMAN

(Collins, 8/6d)

The title of Mr. Newman's most recent book on butterflies is an apt one, for it contains 16 plates in colour of excellent reproductions of paintings of British butterflies by Anthony Moore. These form a really admirable guide to identification, and the collector is given further invaluable information on the classification of butterflies and how to find and catch them, on the care of live butterflies and of a collection.

Mr. Newman is an authority on British butterflies, and in his book he gives a wealth of essential information in a form ideal for carrying in the pocket for quick and easy reference.

MAKE SURE OF YOUR JULY 1959 "M.M."

Copies of the *M.M.* for July 1959, the issue of which was interrupted by the printing dispute, can be obtained by writing to the Publishing Department, Binns Road, Liverpool 13, enclosing a 1/7d. Postal Order to cover postage, etc.

There are still a few copies too of each of the January to June 1959 issues, price 1/7d. each.

BINDING CASES

In these very useful binders, 12 copies of the *Meccano Magazine* are held in position by specially designed wires fitted on stout and well-secured leather thongs. Single copies can be inserted as received. The cover is maroon with the words *Meccano Magazine* in gilt. Price 9/6d. post free.

Readers requiring magazines and binders should write to the Publishing Department, *Meccano Magazine*, Binns Road, Liverpool 13, enclosing a Postal Order for the appropriate amount.

"M.M." SUBSCRIPTIONS

As it was not possible to publish the August issue of the *Meccano Magazine*, all current subscriptions have been automatically extended an extra month. Exceptions are those arranged through one or two London wholesale houses, who, we understand, intend to communicate with their clients direct.

From Our Readers

This page is reserved for articles from our readers. Contributions not exceeding 500 words in length are invited on any subject of which the writer has special knowledge or experience. These should be written neatly on one side of the paper only, and should be accompanied if possible by original photographs for use as illustrations. Articles published will be paid for. Statements in articles submitted are accepted as being sent in good faith, but the Editor takes no responsibility for their accuracy.

Coypu in East Anglia

In recent years naturalists have noticed an increase in the numbers of coypu in East Anglia. This animal is an inhabitant of South America, and was brought to England to breed for its fur, which is that known as nutria. It is thought that some escaped and began breeding in a wild state.

The coypu is a member of the otter family, and lives in marshes, feeding on aquatic plants. It can easily be recognised by its furry body, long scaly tail and long orange-coloured teeth. The picture on this page shows one found on the Harwich and Dovercourt Golf Links. It measured 2 ft. 11 in. to the tip of its tail, and weighed two stones.

It remains to be seen if the coypu will spread out from East Anglia, or if the marshes of the Eastern Counties will remain its home. It is not the only creature brought to Great Britain that has been able to establish itself in freedom. Another is the musquash, brought from North America into England and parts of central Europe. It is smaller than the coypu and has done much damage by burrowing into the banks of streams. Like the coypu, it was introduced for breeding in captivity for its fur.

H. L. HALL (Dovercourt).

Seen From The Air

I recently took a photograph of a boat from a good height above it that is similar, in a smaller way, to that on the cover of the *M.M.* for April last. It is a picture of a sand boat taken from Clifton Suspension Bridge, 245 feet above the River Avon. The hold was full of sand, which

Bow waves in the Avon, made by a sand boat. Photograph by H. Moroney, Penarth.



A coypu captured in East Anglia. Photograph by H. L. Hall, Dovercourt.

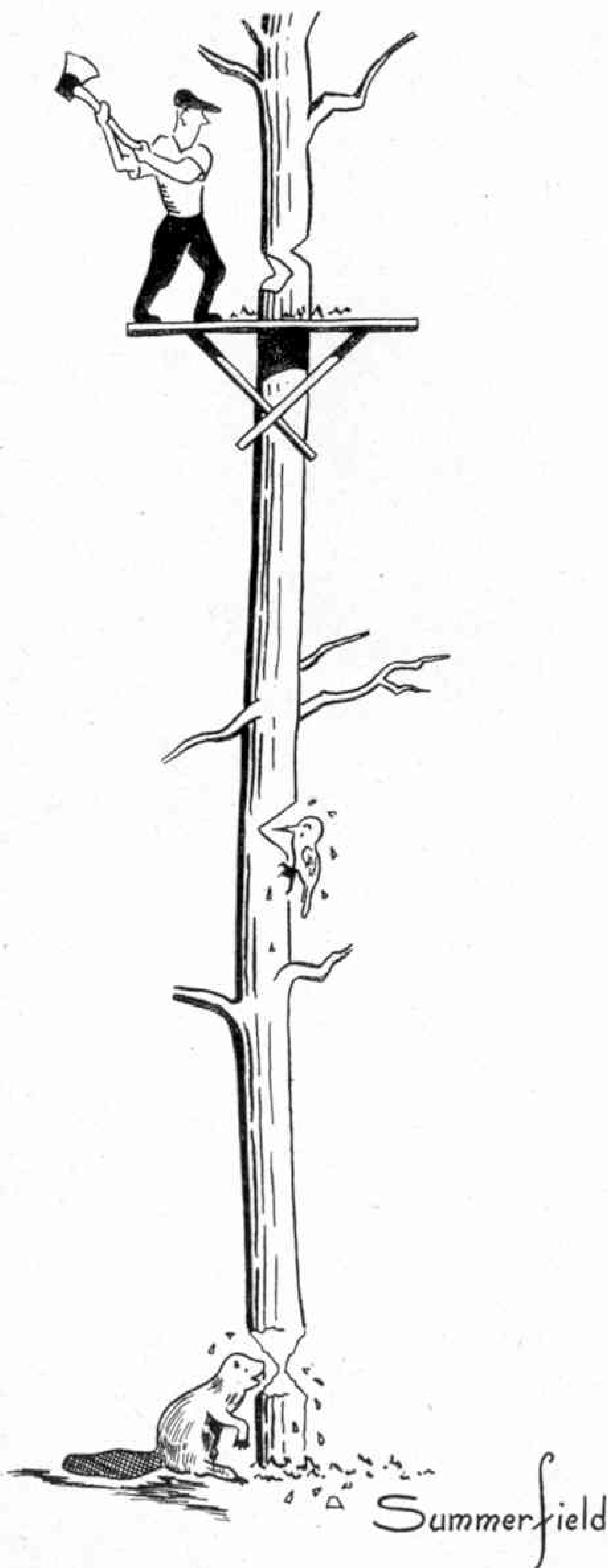
these boats suck up from the sea bed of the Bristol Channel. The sand is unloaded at Bristol docks and used for building purposes. The unusual views that these and other boats present when looked down upon from the bridge are very interesting.

I took the photograph from the centre of the bridge, which is 702 feet long from pier to pier. Many ships of coasting size can be seen passing under this bridge, though the ships of heavy tonnage no longer sail up the River Avon to the city of Bristol, but use the Port of Bristol at Avonmouth instead.

H. MORONEY (Penarth).



Fireside Fun



Policeman to Motorist: "I'm sorry, sir, you can't park here."

Motorist: "But it's a cul-de-sac."

Policeman: "I don't care if its a Rolls-Royce, you can't park it here."

* * * *

Little Dora, minding her baby brother on the front porch, dashed madly into the house, shouting at the top of her voice.

"Quick, Mother, quick!" she cried. "Little Lester has taken off his shoes and stockings, and if you don't hurry outside and stop him he'll be barefooted all over."

* * * *

Teacher: "You there, at the back of the room, what was the date of the signing of Magna Carta?"

Victim: "I don't know."

Teacher: "You don't, eh? Well, let's try something else. Who was Bonnie Prince Charlie?"

Victim: "I don't know."

Teacher: "You don't? How do you ever expect to pass this class?"

Victim: "Well, I don't, mister. You see I just come in to fix the wiring."

THIS MONTH'S BRAIN TEASERS

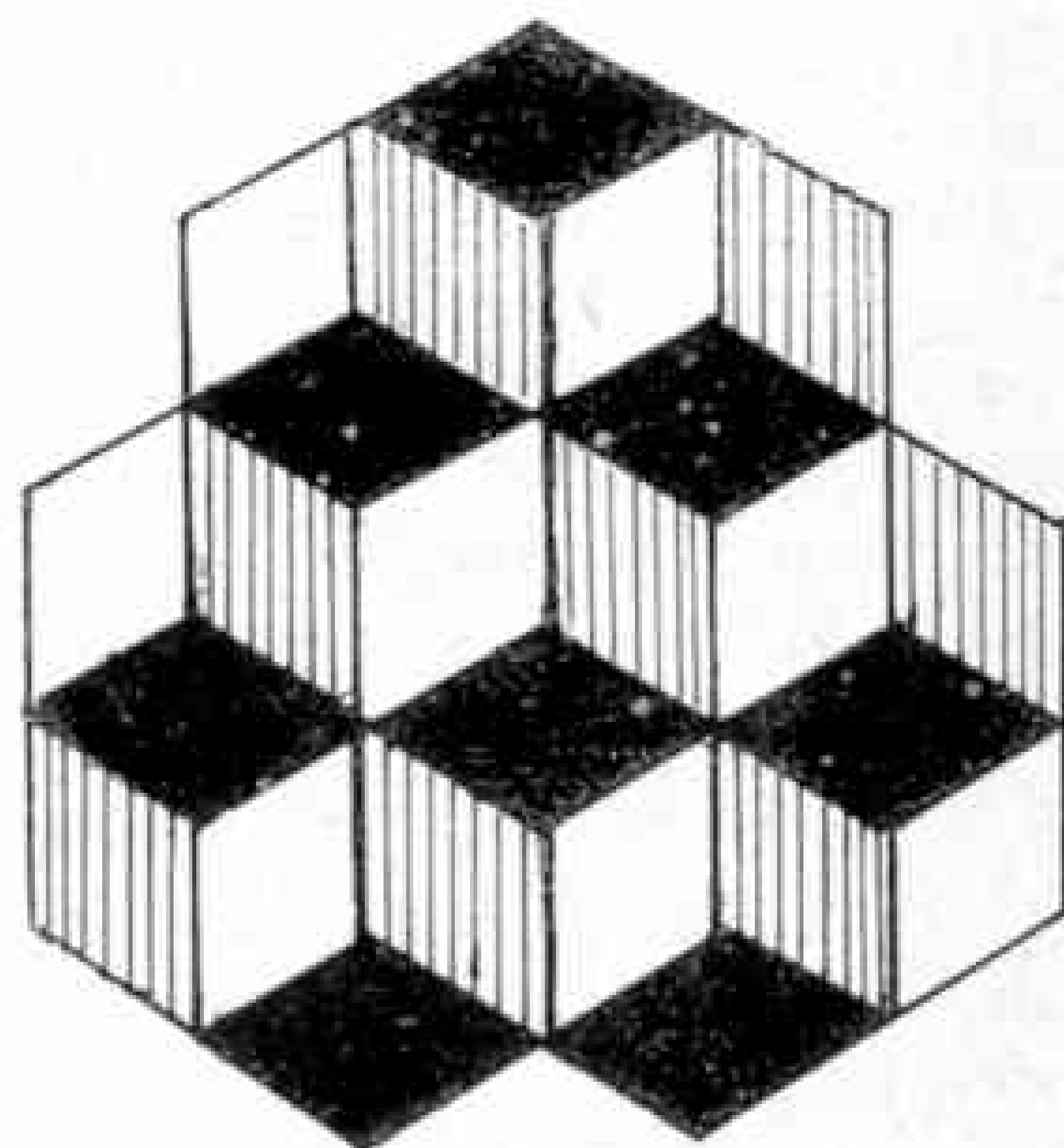
HIDDEN STORY TITLES

Each of the following phrases indicates the title of a well-known book or story. For example, No. 1 indicates "A Christmas Carol," Charles Dickens' famous book. Can you discover the titles indicated by each of the other seven phrases?

- (1) A song for the Festive Season.
- (2) Water surrounds this source of riches.
- (3) The primate's flipper.
- (4) The Red Flower.
- (5) Eastern Evenings.
- (6) An ancient store.
- (7) Cheerless residence.
- (8) West Indian Resting Place?

HOW MANY CUBES?

Look at the accompanying illustration and see if you can state exactly how many cubes there are in the diagram. You will probably discover the number at first glance, but are you sure your answer is correct?



* * * *

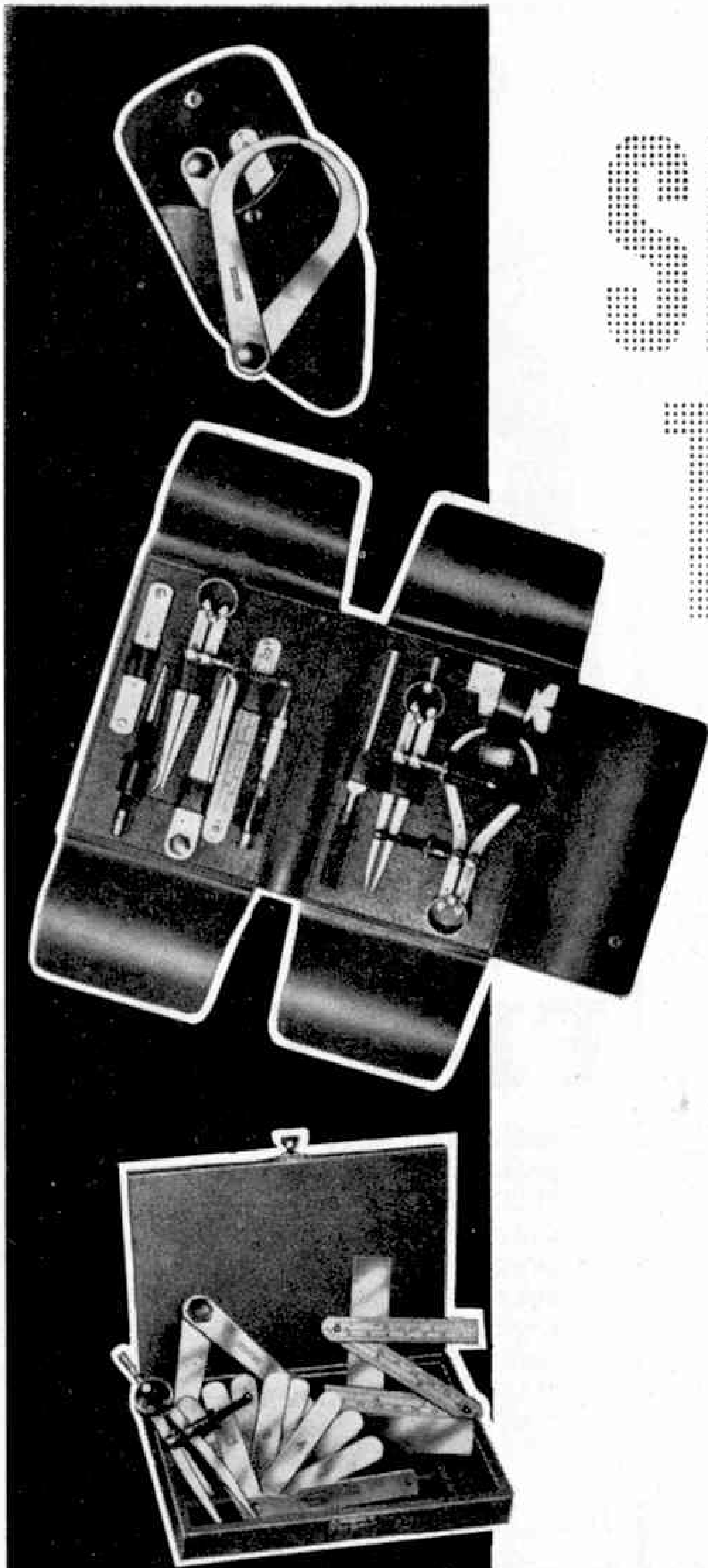
ANSWERS TO THE JULY M.M. PUZZLES

Recipe

The product of the weird collection of ingredients that go to make up the recipe in the July *Meccano Magazine* is, as you will no doubt have guessed, Robert Louis Stevenson's famous adventure story, *Treasure Island*.

Which Was Which?

The actual examination results were as follows:—1st, Tom; 2nd, Bill; 3rd, Dick; 4th, John; 5th, Harry. Did you manage to get them all in the right order?



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Set of Tools, Catalogue No. 330



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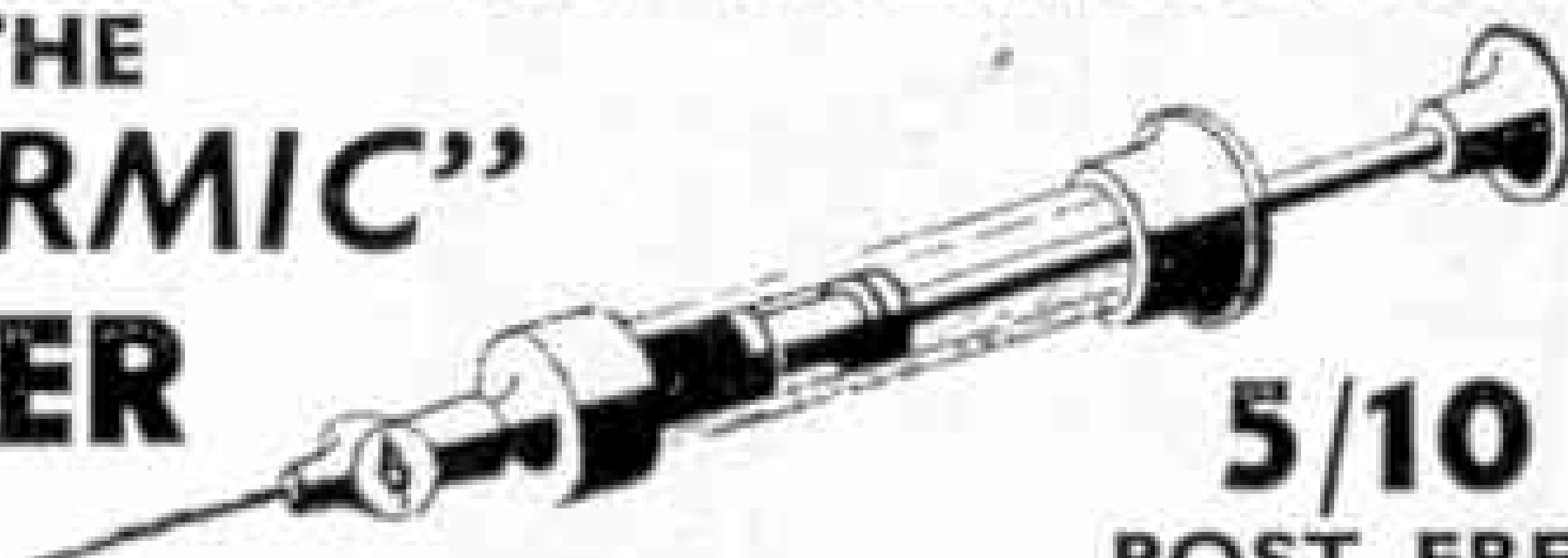
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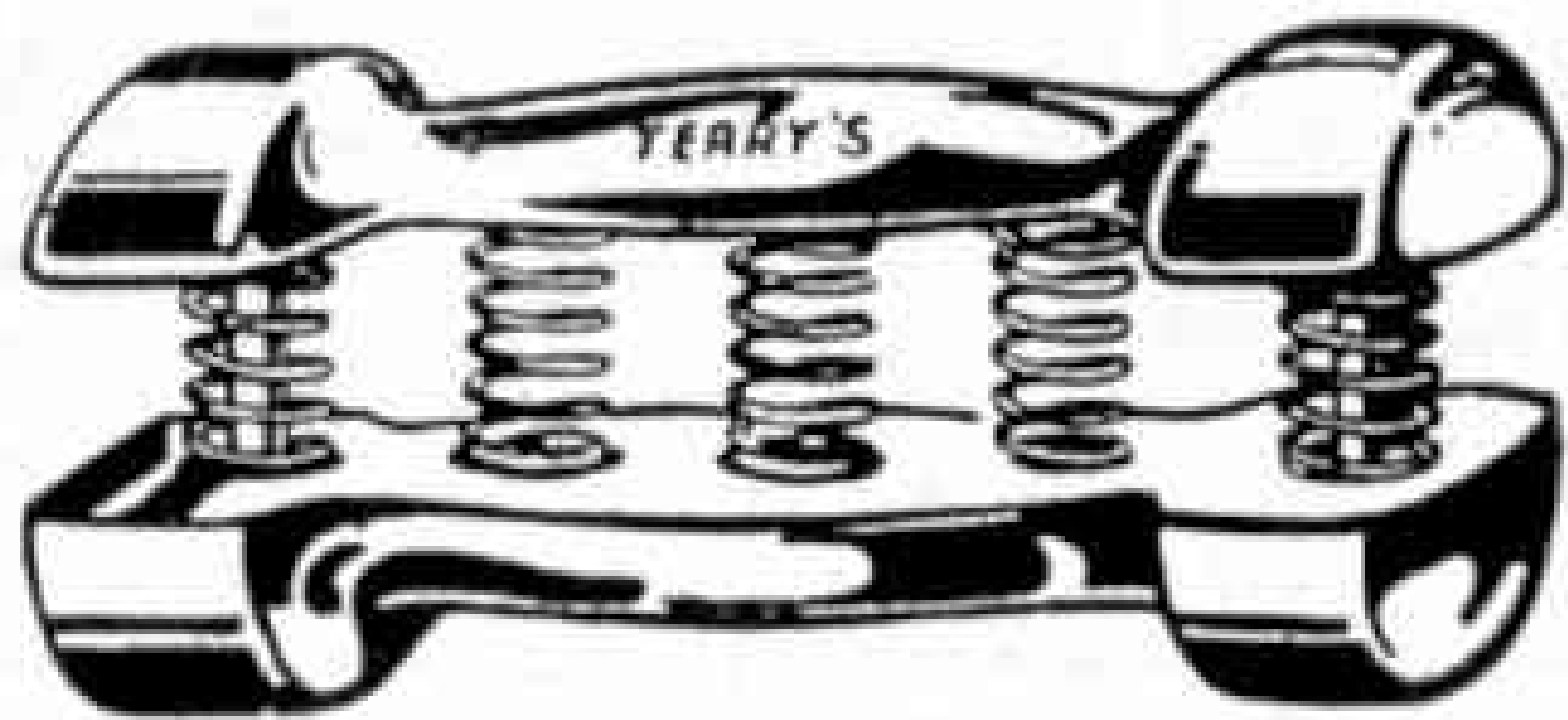
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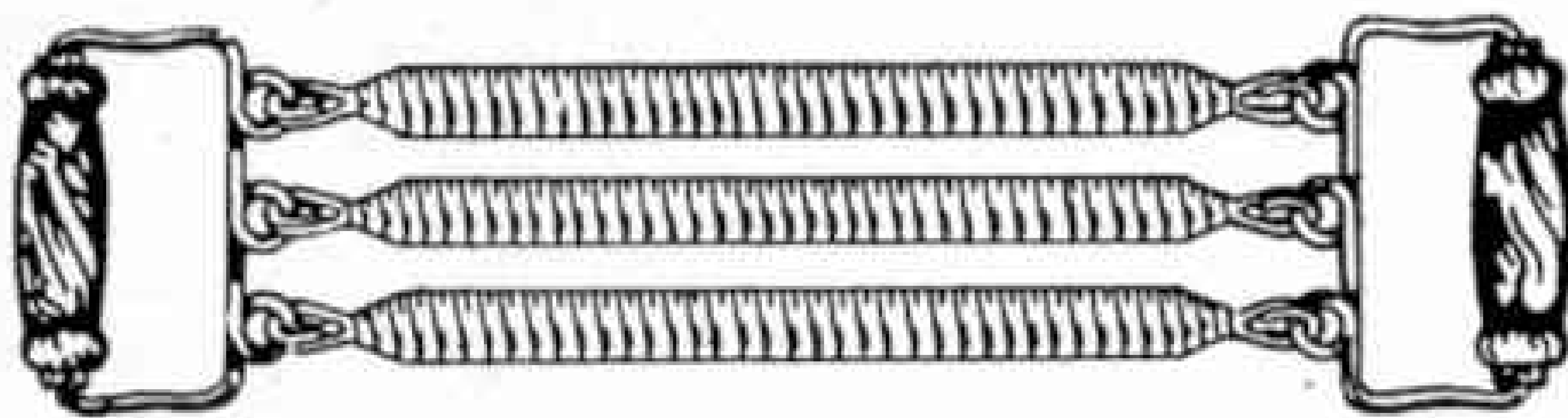


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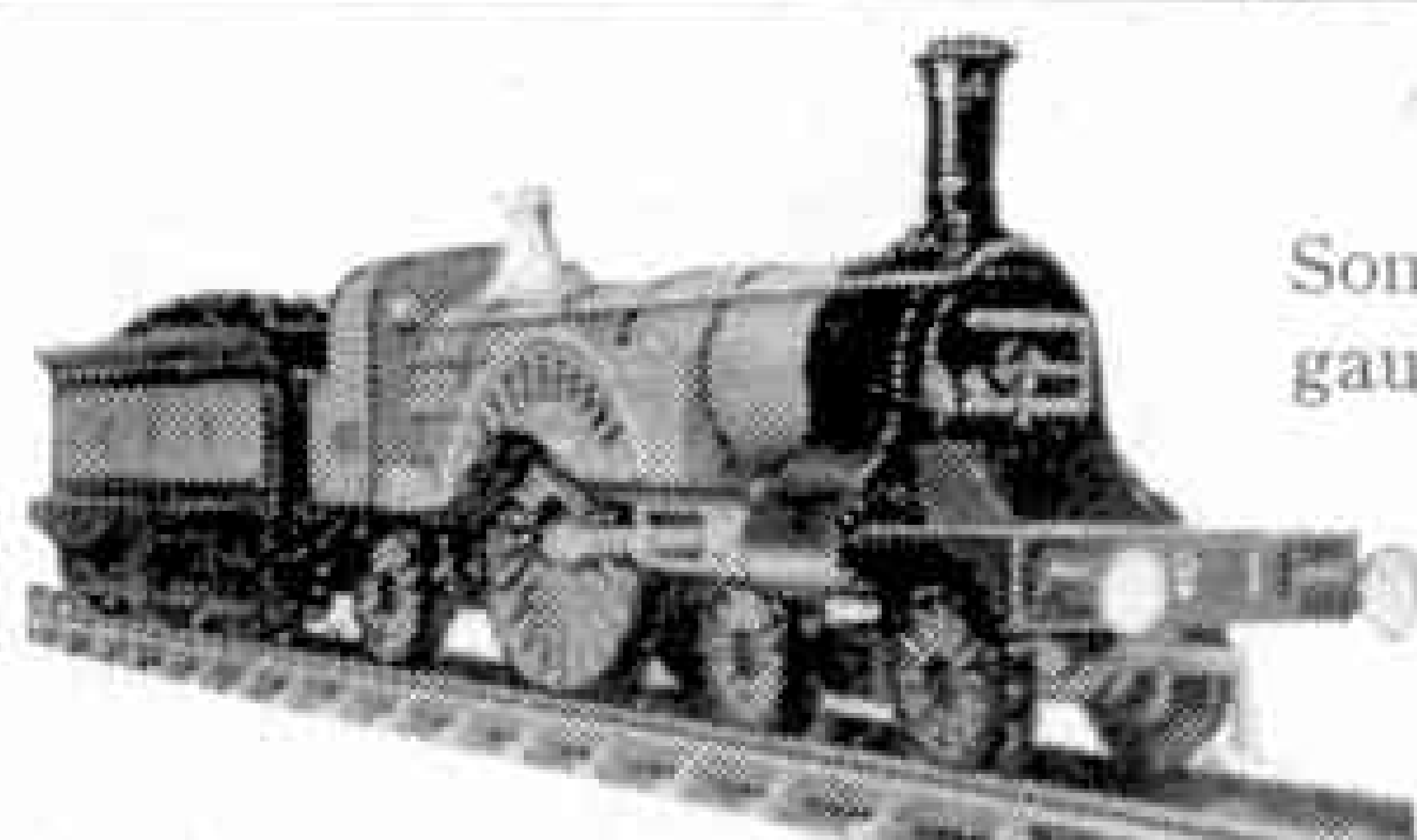
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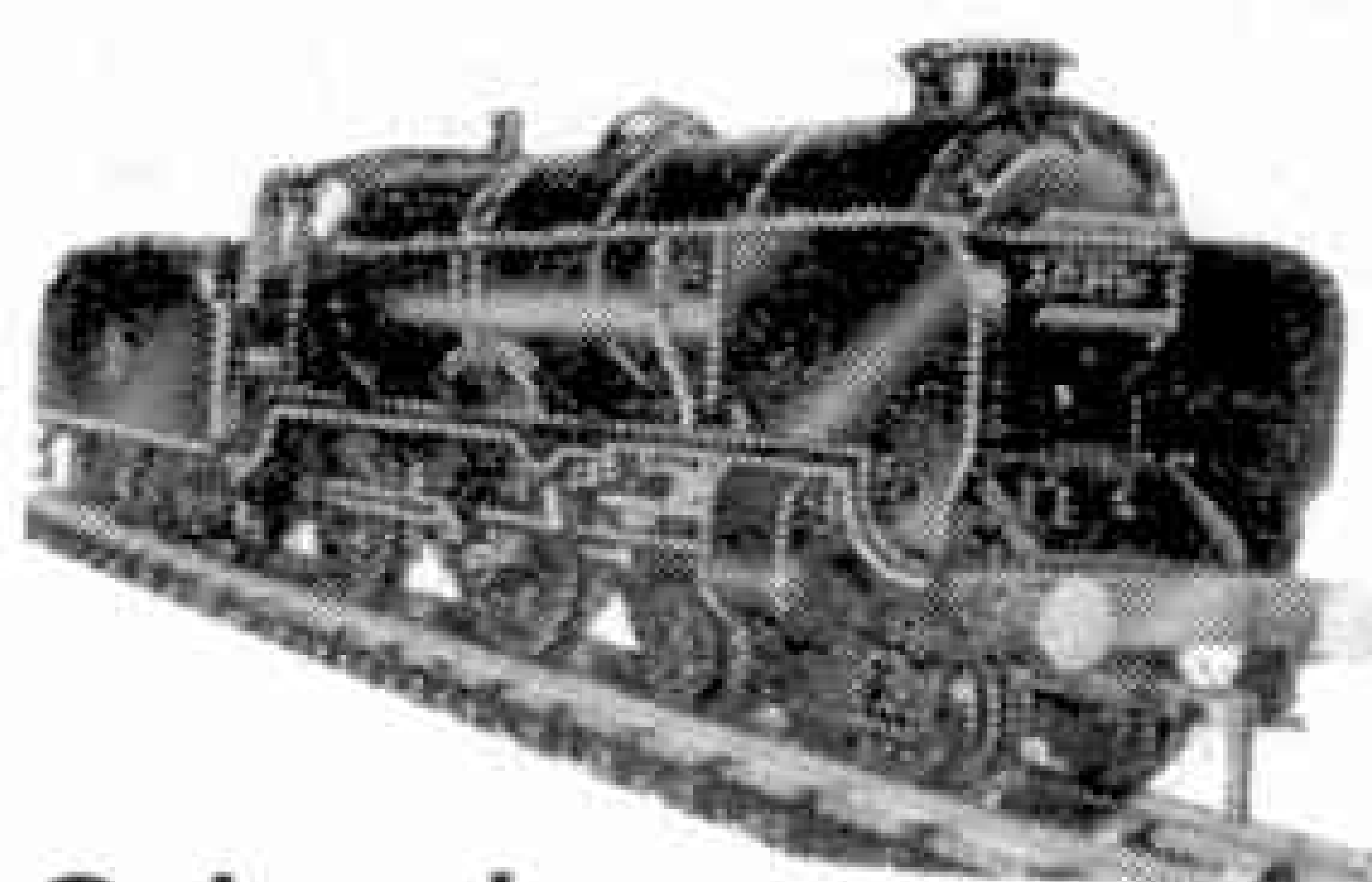
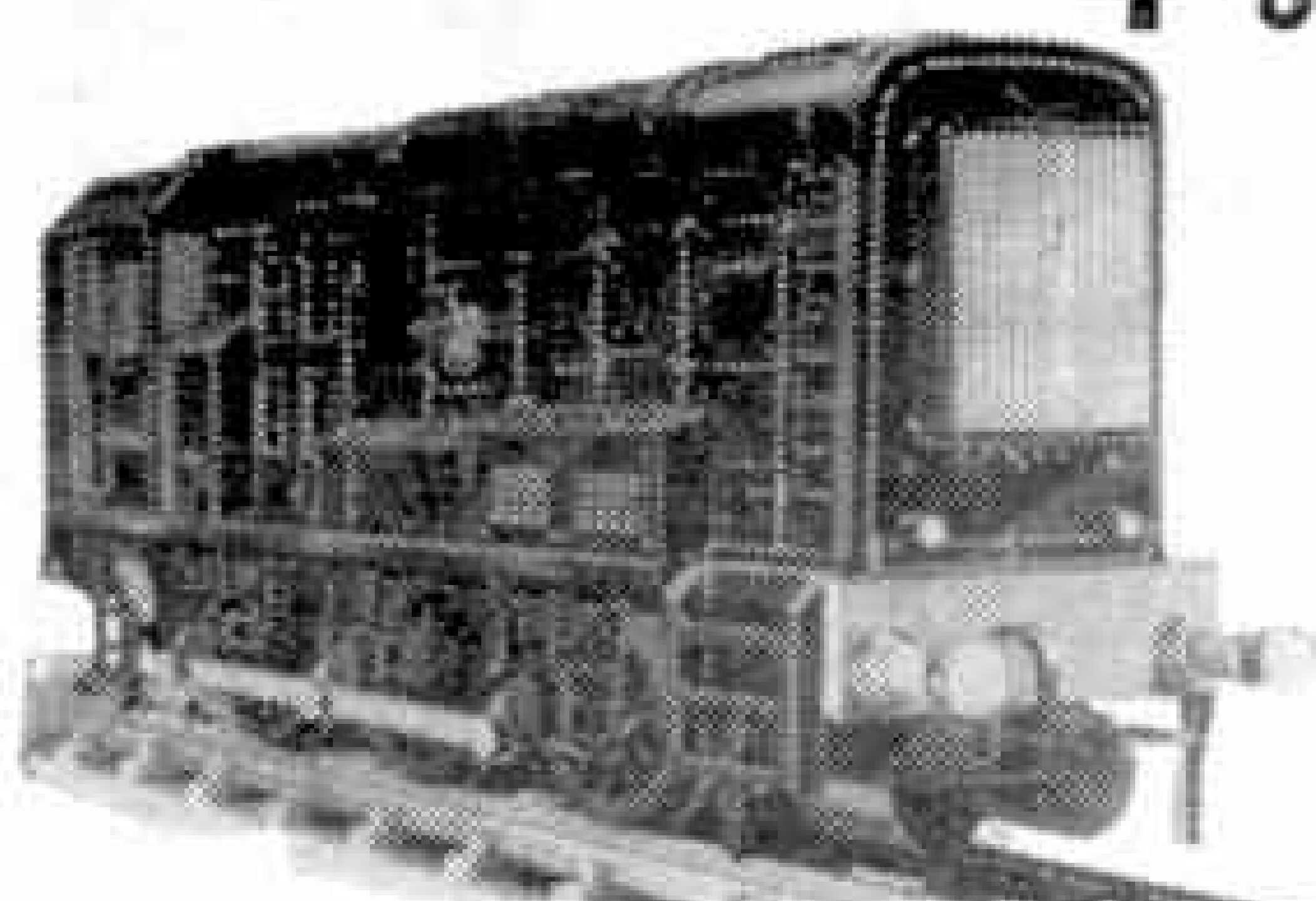
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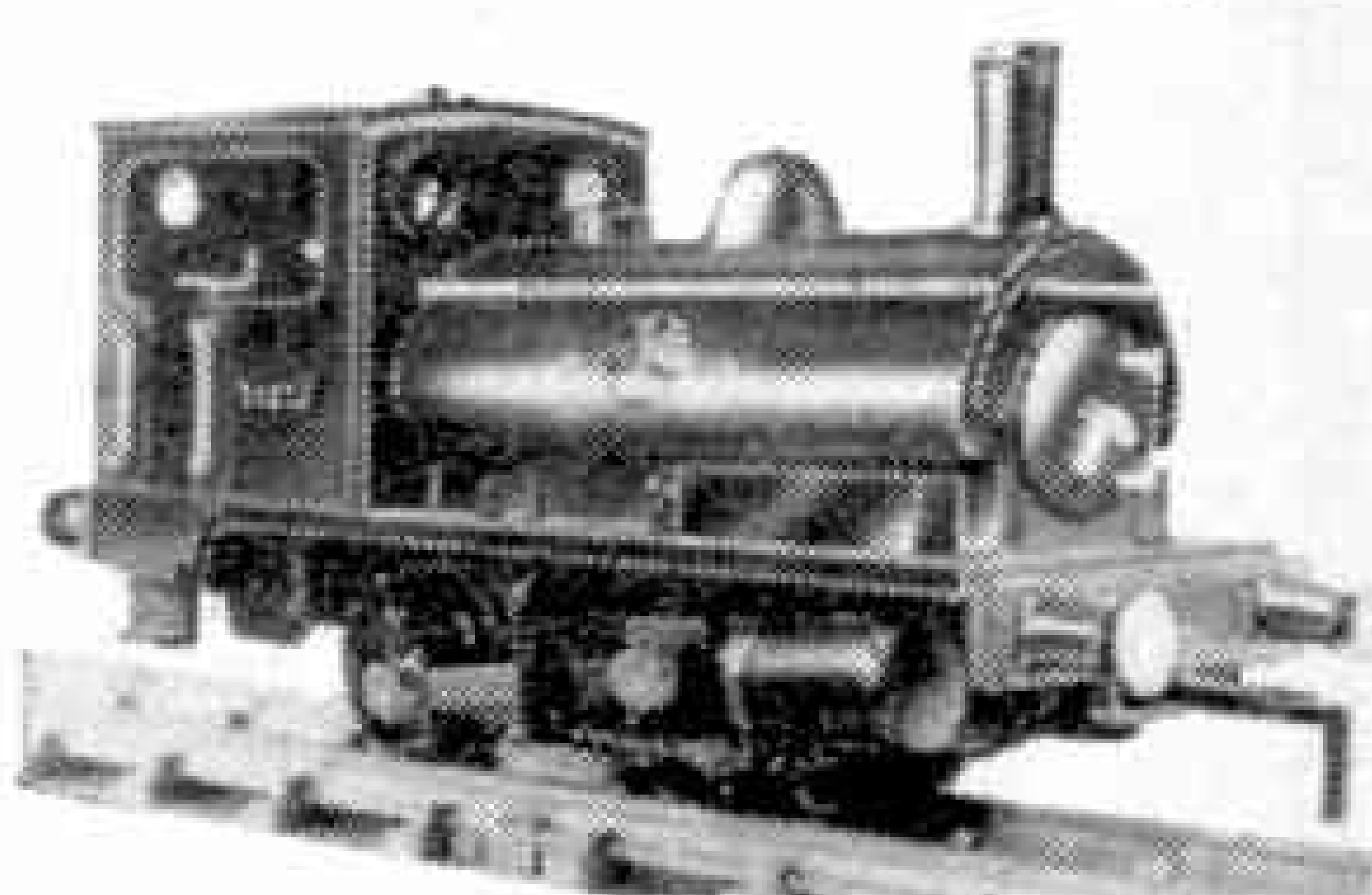
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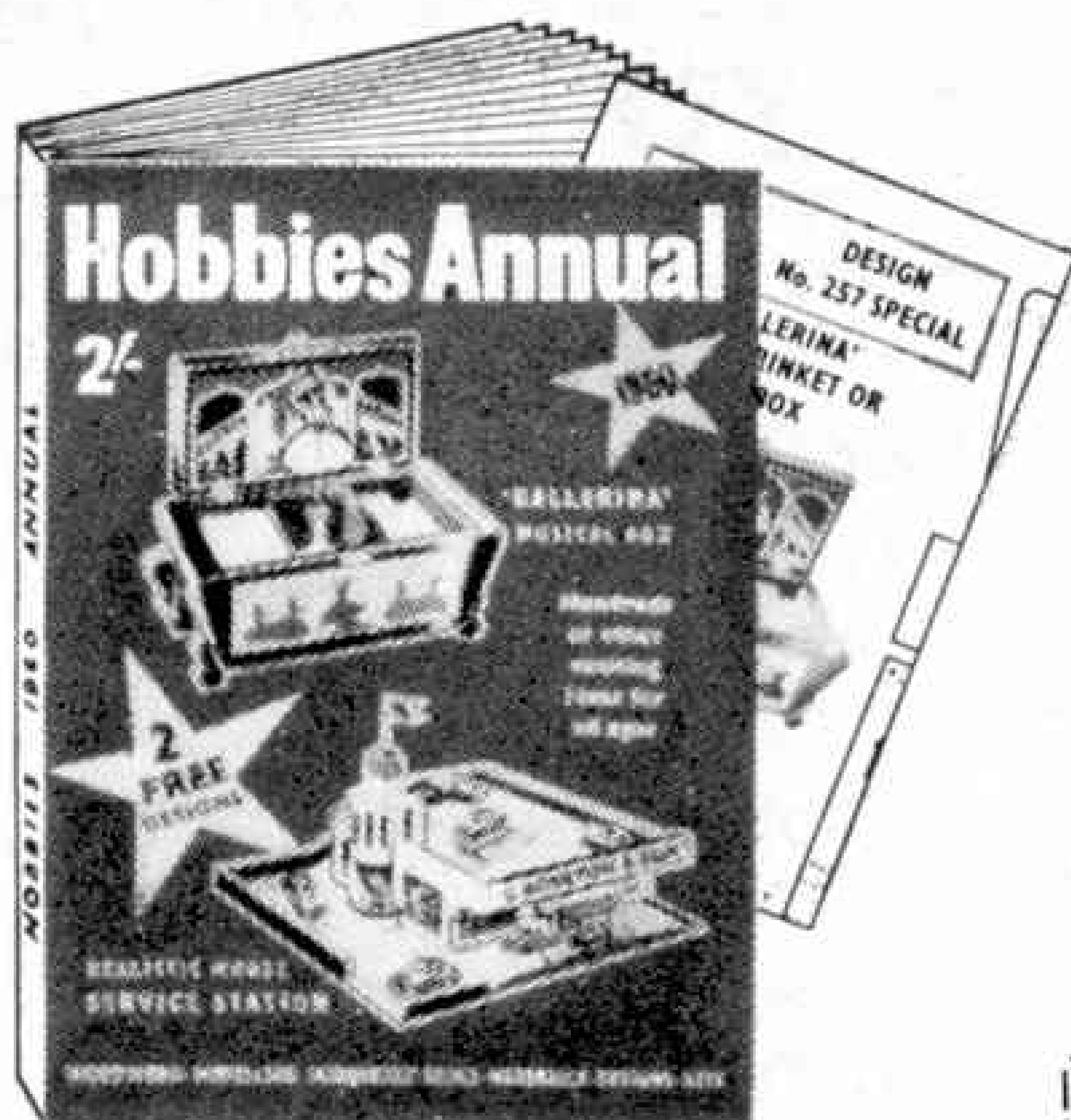
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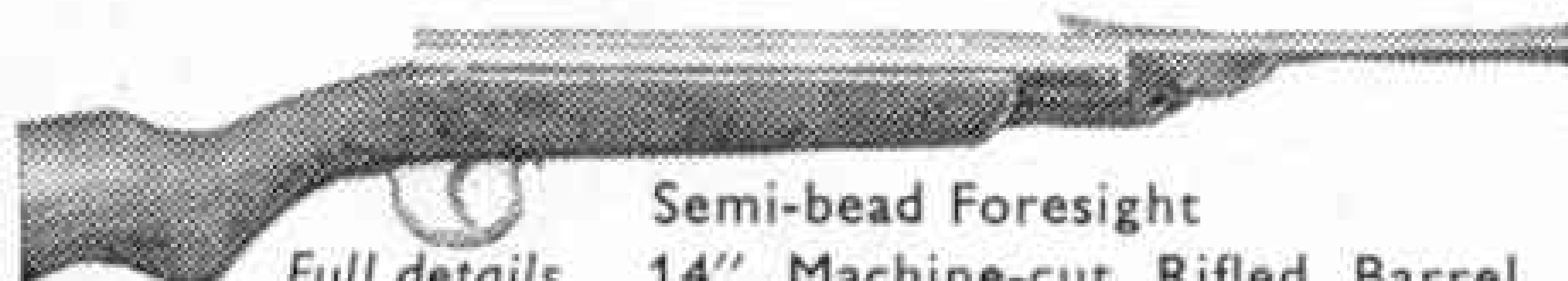
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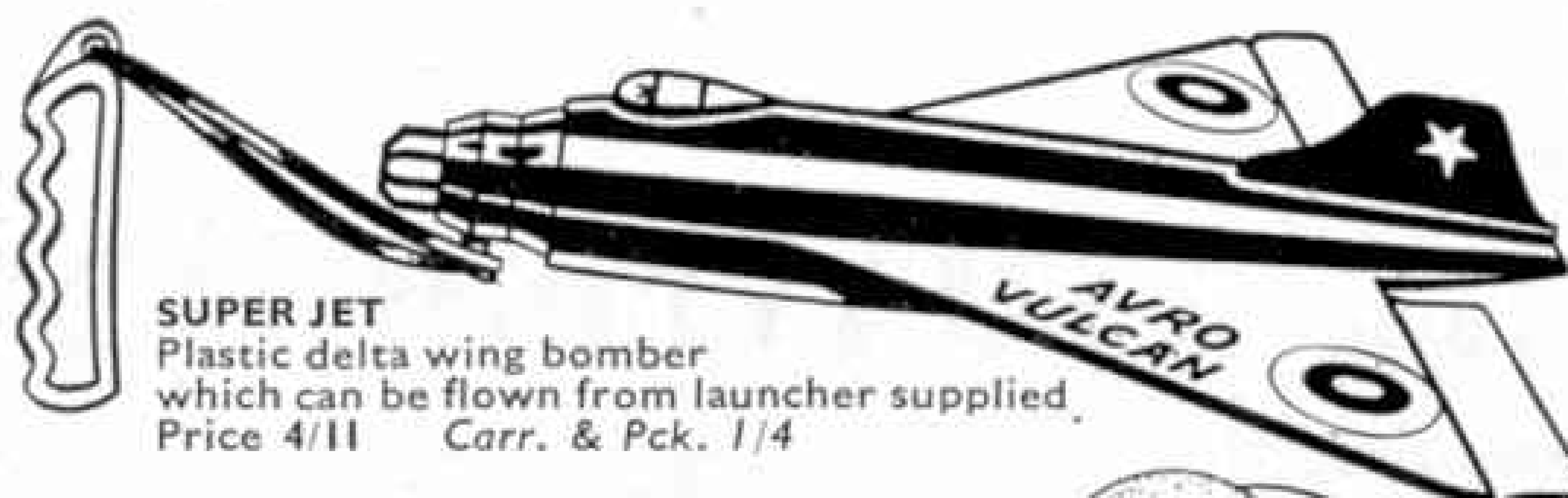
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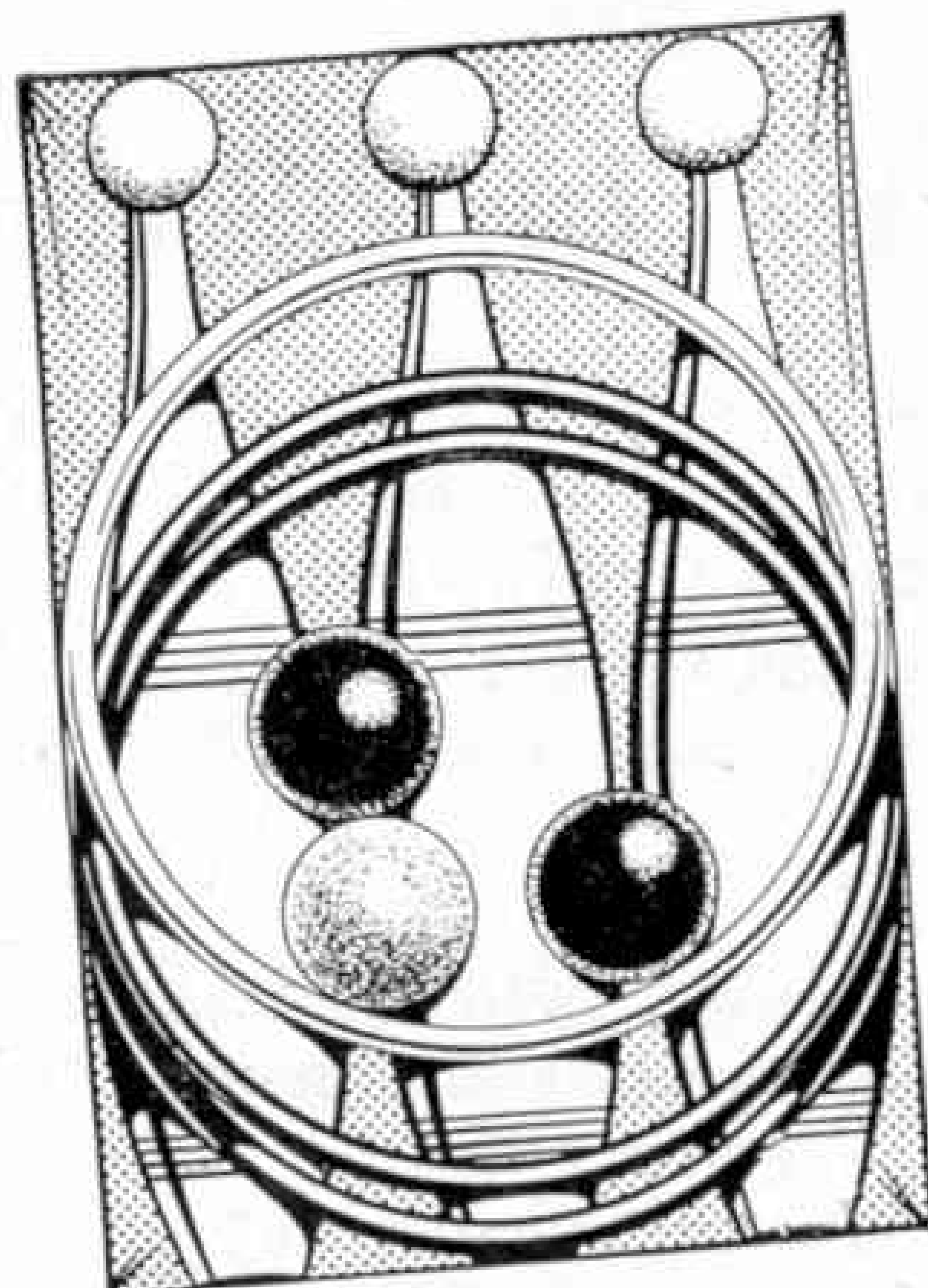
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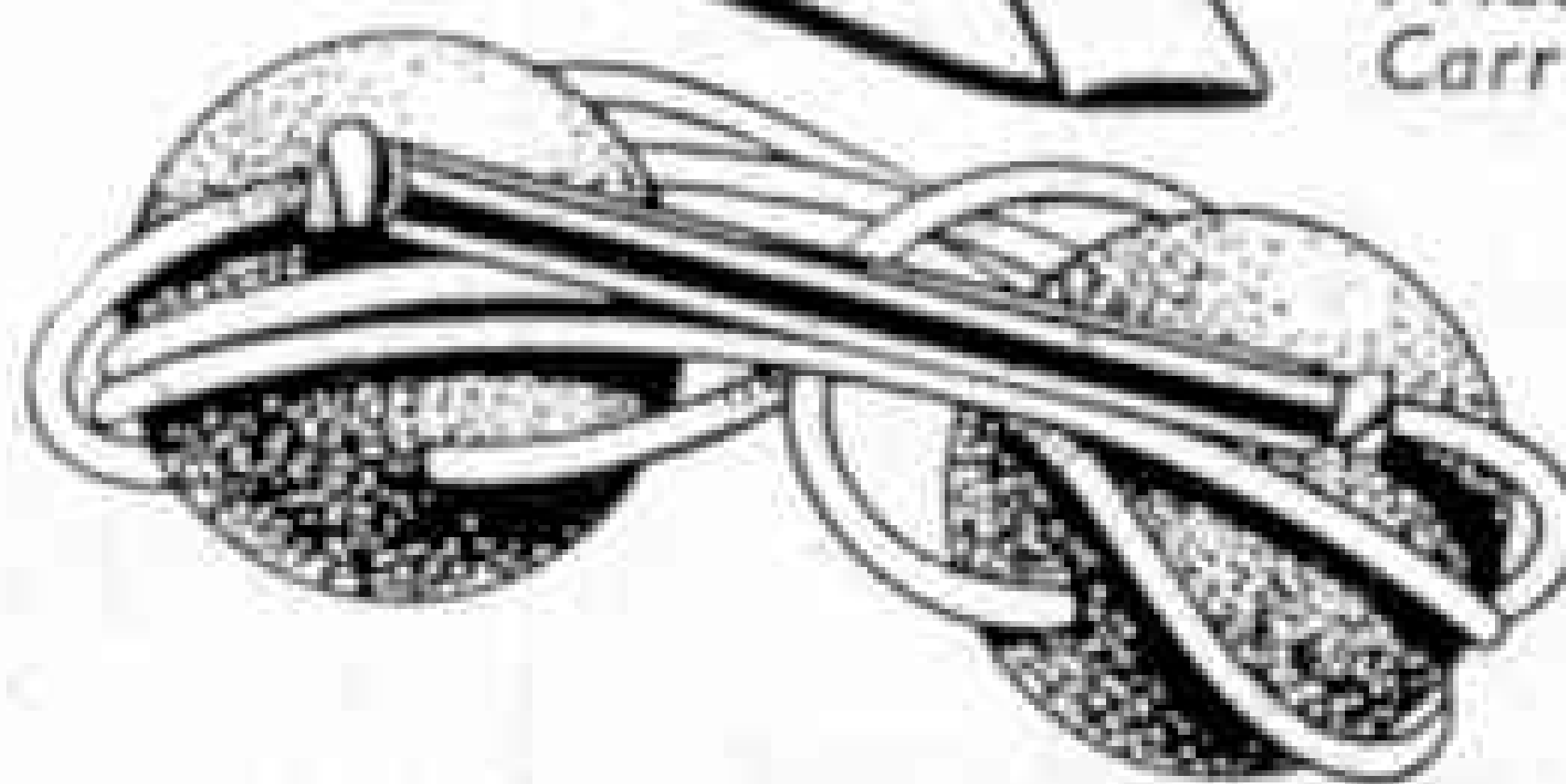
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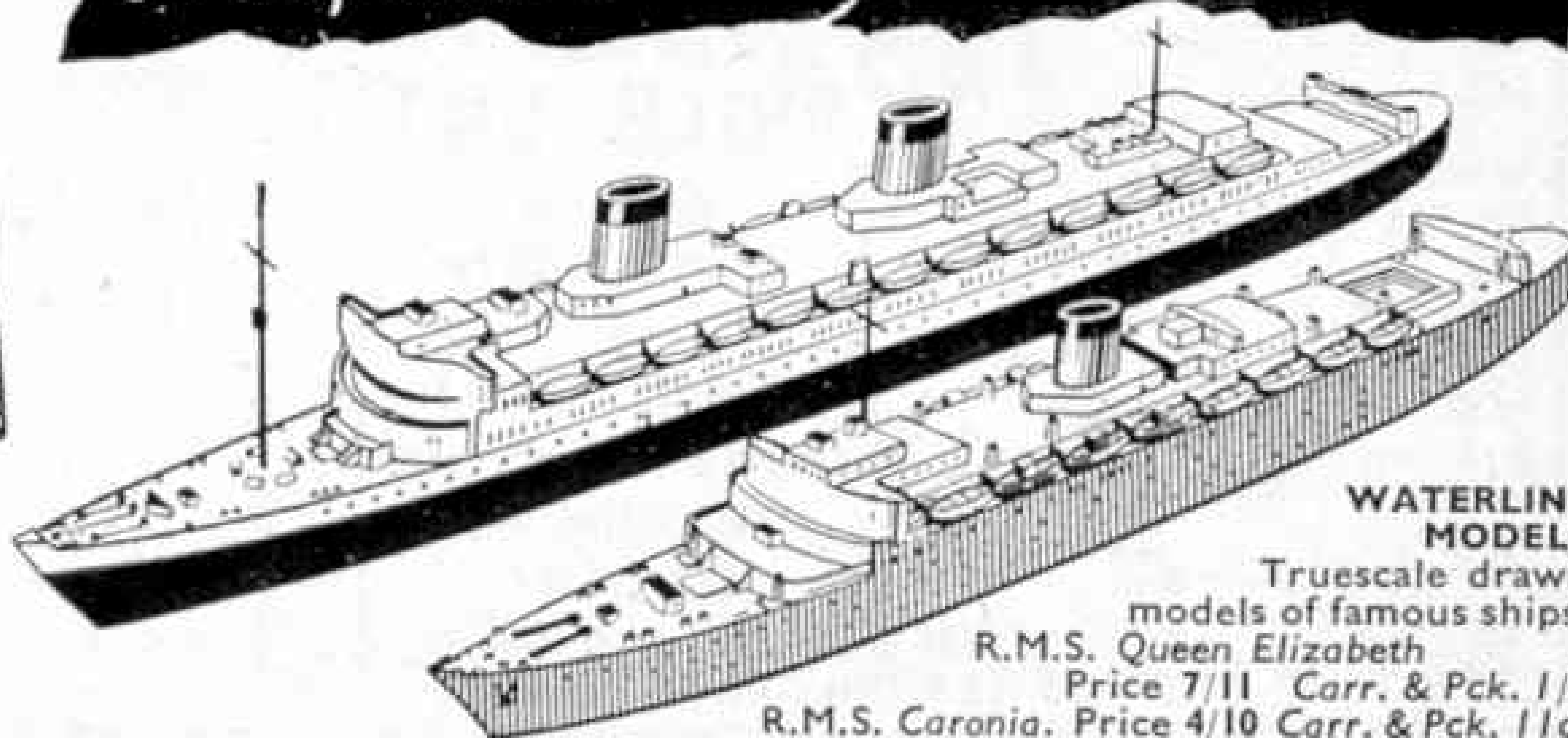


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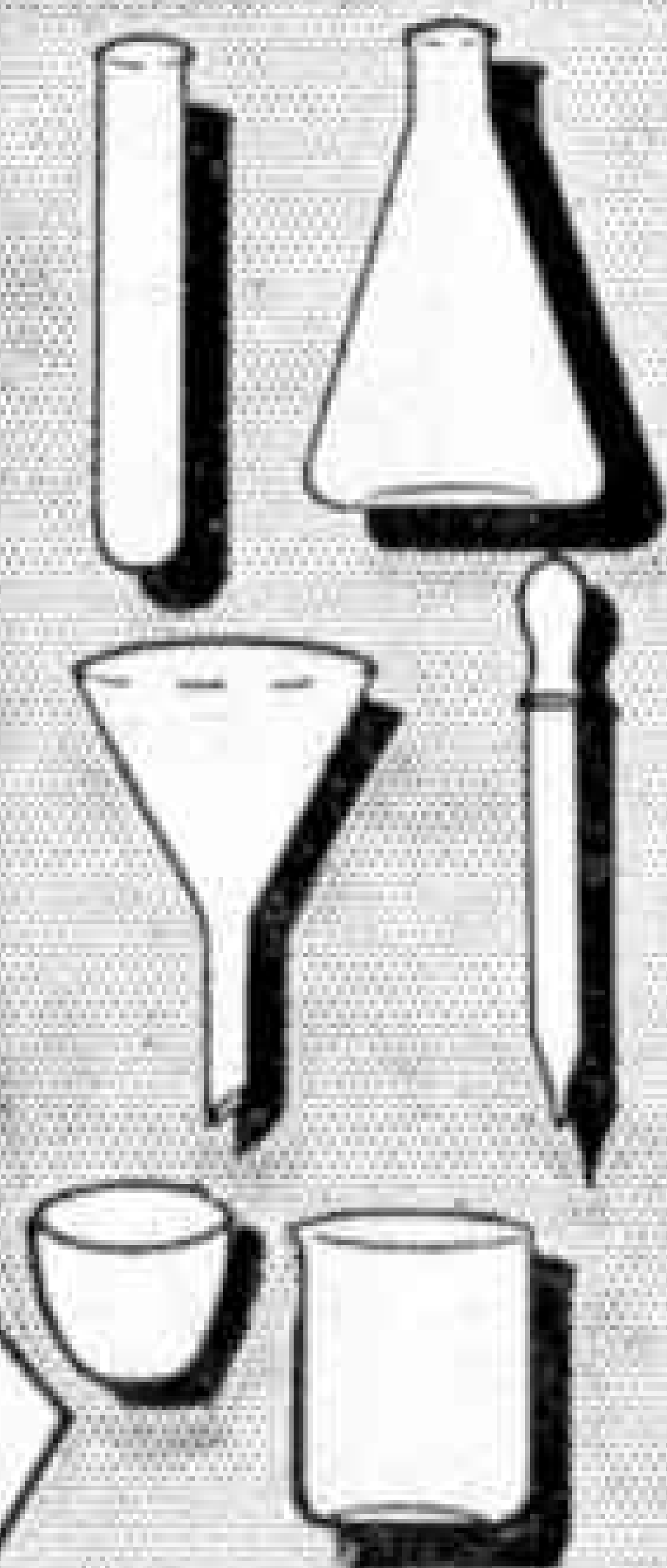
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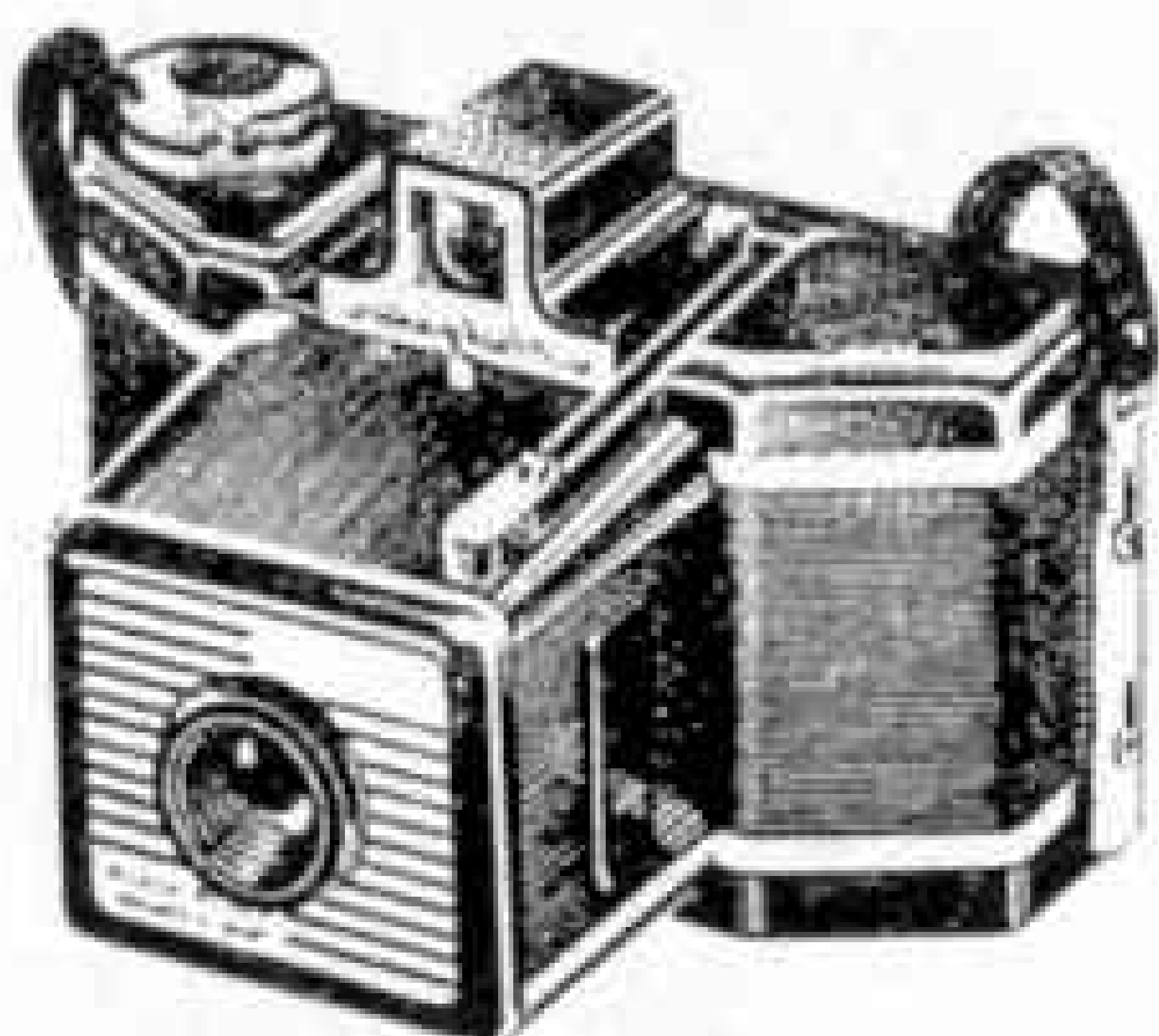
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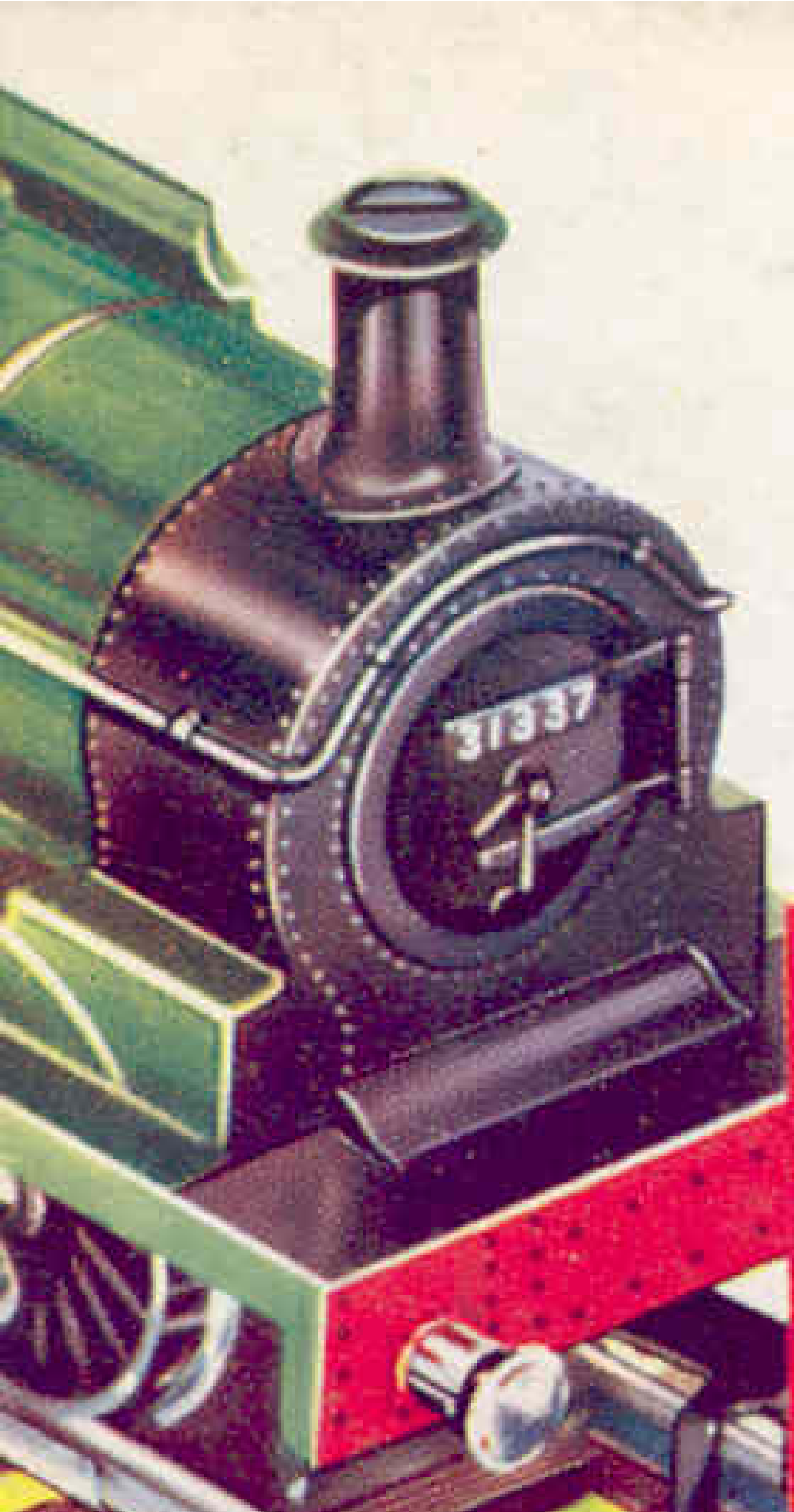
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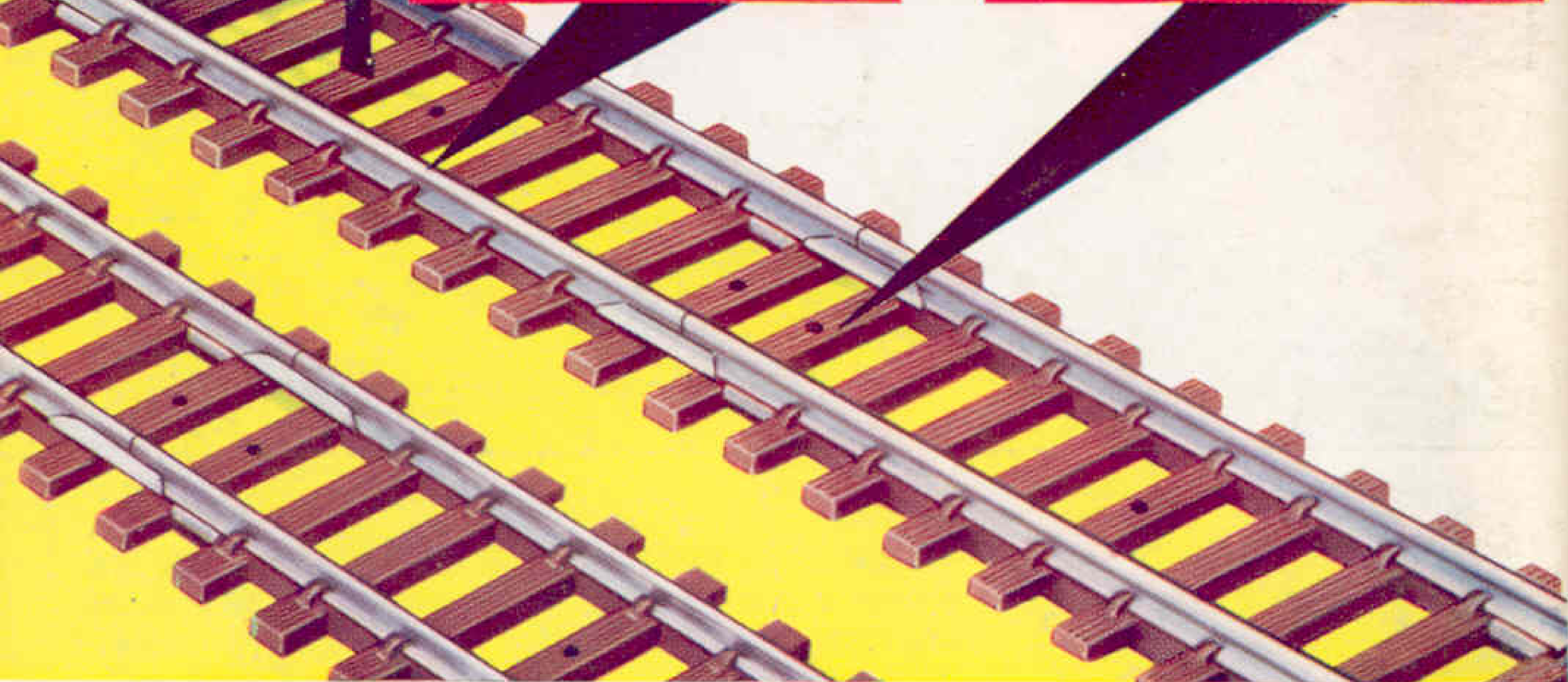
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Already accepted as the finest model railway track ever produced.

The rails are solid drawn nickel silver for high conductivity and non-corrosion. They are mounted on a moulded base incorporating individual sleepers, providing quiet running, perfect insulation and a remarkable degree of realism.

Straight rails and 15 in. radius curved rails form the basis of this new system, and there are 12 curved rails to a circle. Thus the half and quarter circles frequently required by the average layout plan are readily arranged by the use of quarter curves.

In addition to the full-length straight rails, there are shorter straight rails, one-third and two-thirds, respectively, of the length of the standard straight rails.

Hand-operated points and electrically-operated points will be available later.

Made by Meccano Ltd., Liverpool